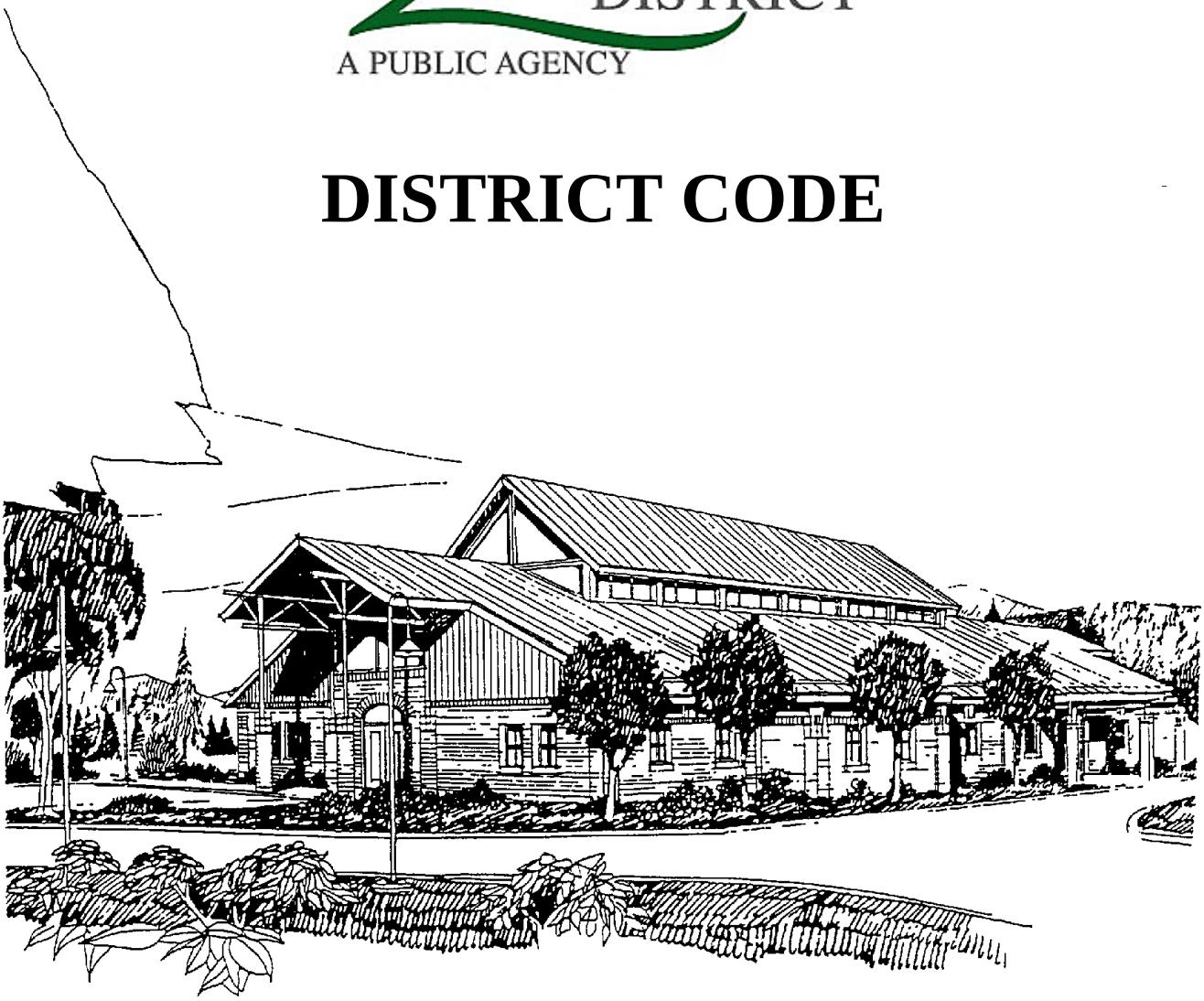
TRUCKEE SANITARY DISTRICT

A PUBLIC AGENCY

DISTRICT CODE



ORDINANCE 1-2021

AMENDED BY RESOLUTION NO. 2022-119

EFFECTIVE JANUARY 1, 2023

TRUCKEE SANITARY DISTRICT

CODE

ORDINANCE 1-2021

AMENDED BY RESOLUTION NO. 2022-119

BOARD OF DIRECTORS

DENNIS ANDERSON
JERRY GILMORE
BRIAN KENT SMART
RON SWEET
NELSON VAN GUNDY

STAFF

GENERAL MANAGER/CHIEF ENGINEER	BLAKE R. TRESAN, P. E.
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER	RAYMOND P. BROWN, P. E.
O & M SUPERINTENDENT	ERIC SUNDALE
FINANCE AND ADMINISTRATIVE SERVICES MANAGER	MARK J. WASLEY
EXECUTIVE ASSISTANT/BOARD CLERK	DIANE PICCIOLI

Adopted: October 21, 2021

Effective: January 1, 2023

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ORDINANCE 1-2021

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE TRUCKEE SANITARY DISTRICT REPEALING AND REPLACING THE TRUCKEE SANITARY DISTRICT CODE AND ADOPTING CERTAIN REVISED FEES AND RATES

Be it ordained by the Board of Directors of the Truckee Sanitary District as follows:

SECTION 1. The purpose of this Ordinance is to adopt the Truckee Sanitary District Code, (revised October 2021) a compilation and codification of existing District procedures, rules, regulations, rates, charges and fees, together with those secondary codes adopted by reference as authorized by the state laws, rules, and regulations. A certified copy of the Code is on file in the office of the Clerk of the District and is available for public review during normal business hours. Copies of the Code are available on the District website at www.truckeesan.org and available for inspection at the District's office during normal business hours.

SECTION 2. The Truckee Sanitary District Code (revised October 2021), including any secondary codes adopted by reference, is hereby adopted as the rules, regulations and standards of the District. The Truckee Sanitary District Code adopted by Ordinance 1-2017, as amended, is hereby repealed.

SECTION 3. Whenever a reference is made to this code as the Truckee Sanitary District Code or to any portion thereof, or to any ordinance of the District, the reference shall apply to all amendments, corrections and additions heretofore, now or hereafter made.

SECTION 4. Any person, corporation, or other legal entity who violates, or fails to comply with, any provision of the Truckee Sanitary District Code, adopted by reference pursuant to this Ordinance, shall be guilty upon conviction of a misdemeanor. Any person, corporation or other legal entity convicted of a misdemeanor for violation of the Truckee Sanitary District's Code is punishable by a fine of not more than one thousand dollars ($1,000), or by imprisonment in the county jail not to exceed 30 days, or by both. Each person, corporation or other legal entity shall be guilty of a separate offense for each and every day during which any portion of which any violation, or failure to comply with, any provision of the Truckee Sanitary District Code is committed, continued or permitted by any such person, corporation or legal entity, and such person, corporation or legal entity shall be punished accordingly.

SECTION 5. The Clerk of the District is directed to enter a certified copy of this Ordinance in the minutes of the Board of Directors

SECTION 6. This Ordinance and the Truckee Sanitary District Code adopted by reference by this Ordinance shall take effect on January 1, 2022. Prior to the effective date of this Ordinance, this Ordinance shall be published one time in a newspaper of general circulation printed and published within the Truckee area.

PASSED AND ADOPTED by the Board of Directors of the Truckee Sanitary District at a regular meeting of the Board, held on the 21st day of October, 2021, by the following vote:

AYES: Anderson, Gilmore, Sweet, Van Gundy
NOES: None
ABSENT: Smart
ABSTAIN: None

Nelson Van Gundy,
President of the Board of Directors

ATTEST:

Blake Tresan,
Board Secretary

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RESOLUTION NO. 2022-119

TRUCKEE SANITARY DISTRICT
BOARD OF DIRECTORS
RESOLUTION NO. 2022-119

A RESOLUTION ADJUSTING DISTRICT CONNECTION FEES

WHEREAS, the Truckee Sanitary District (District), is the public agency responsible for the collection and conveyance of wastewater in the greater Truckee area; and

WHEREAS, the District charges new customers and those customers increasing their level of service a connection fee; and

WHEREAS, connection fees are placed in a restricted fund to be used solely for capital projects that expand the capacity of the District so that "growth pays for growth"; and

WHEREAS, the District contracted with Carollo Engineering to conduct a hydraulic model study to determine which components of the District infrastructure require capacity related capital improvements to accommodate projected future sewer flows; and

WHEREAS, Carollo Engineering determined in their August 2019 Sewer System Hydraulic Model Update that there were numerous existing District sewer pipeline and pump station facilities that would require capacity related improvements to accommodate projected future sewer flows; and

WHEREAS, the current connection fee rate, which went into effect on January 1, 2022, was established by Ordinance 1-2021 based on a Connection Fee Adequacy Analysis performed by HDR Engineering; and

WHEREAS, the Connection Fee Adequacy Analysis, which recommended the current connection fee rate, was accepted by the Board in March of 2021, is incorporated herein by reference, and is available at the District office and on the District's website; and

WHEREAS, the connection fee rate, in accordance with the District's Reserve Fund Policy, is to be reviewed annually and adjusted as necessary to account for inflation and increased construction costs; and

WHEREAS, inflation and increased construction costs shall be measured using the Engineering New Record Construction Cost Index for San Francisco (ENR-CCI-SF); and

WHEREAS, the ENR-CCI-SF for March of 2021 (the date the Board accepted the Connection Fee Adequacy Analysis) shall be used as the basis for future changes; and

WHEREAS, construction costs have increased by approximately 14% between March of 2021 and August of 2022 as measured by the change in the Engineering New Record Construction Cost Index for San Francisco (ENR-CCI-SF); and

WHEREAS, the District, in accordance with Ordinance 1-2022, can adjust connection fees by resolution; and

WHEREAS, the District noticed and conducted a public hearing on the proposed increase in connection fees;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Truckee Sanitary District as follows:

1. The fees set forth in Ordinance 1-2021 are hereby amended by adopting the revised APPENDIX A-2, TRUCKEE SANITARY DISTRICT CONNECTION FEE SCHEDULE, which increases connection fees by approximately 14%, and is attached hereto and incorporated herein.

2. The connection fee increase shall become effective January 1, 2023.

PASSED AND ADOPTED by the Board of Directors of the Truckee Sanitary District at the postponed regular meeting of the Board held on the 22nd day of September 2022, by the following roll call vote:

AYES: Anderson, Gilmore, Smart, Van Gundy, Waters
NOES: None
ABSENT: None
ABSTAIN: None

Dennis Anderson,
President of the Board of Directors

ATTEST:

Blake R. Tresan,
Board Secretary

APPENDIX A-2
TRUCKEE SANITARY DISTRICT - CONNECTION FEE SCHEDULE

Type of Connection	Unit of Measure	Billing Code	Fee / Unit
Residential [1]	Dwelling Unit	R	830.00 /unit plus 0.41 /sq.ft.
Commercial Establishments (unless otherwise noted below)	# of Plumbing Fixture Units [2]	B	110.00
Hotel/Motel (without kitchen)	Dwelling Unit	M	446.00
Hotel/Motel (with Kitchen)	Dwelling Unit	N	578.00
Campsite (with sewer)	# of Sites	K	414.00
Campsite (without sewer)	# of Sites	Q	314.00
Markets	# of Plumbing Fixture Units [2]	G	110.00
Laundries	# of 10 lb Machines	L	528.00
	# of 20 lb-50 lb	X	1056.00
Restaurants & Bars	# of Inside Seats	F	110.00
	# of Outside Seats	Z	55.00
	# of Banquet Seats	Y	40.00
Theaters	# of Seats	T	18.00
Churches	# of Seats	C	18.00
Hair Salon - Type 1	# of Service Chairs	H	462.00
Hair Salon - Type 2	# of Service Chairs	A	826.00
Unclassified Service [3]	# of Units	E	55.00
Other	As determined by the General Manager	S	28.00

(1) Connection Fees for Residential living space additions greater than 500 sq.ft. where sewer connection is already established will be charged $0.41 / sq.ft.

(2) Refer to Appendix A-4

(3) This factor serves as a multiplier to hold the correct values on an account.

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1. ADMINISTRATION

1.01 Title

The Truckee Sanitary District Code represents, and may be referred to as the District Code. The District Code meets or exceeds the Uniform Plumbing Code, the Uniform Building Code, National Electrical Code, National Fire Protection Code, and other codes as listed in Definitions and Abbreviations.

1.02 Introduction

The purpose of the District Code is to provide the public with an accessible document specifying requirements and guidelines applicable to all sanitary sewer facility construction and maintenance within the District boundaries. The District Code also establishes charges for services and provides a method for the collection of said charges.

Formed in 1906, the Truckee Sanitary District (District) is one of the oldest sanitary districts in the State of California; it has provided service since 1908. Throughout the years, the Truckee Community has changed considerably. Sanitary sewer technology has improved and will continue to improve over time. The ever changing Truckee Tahoe Community, improved technology, and a constructive District Board attitude, have combined to maintain the excellence of the sanitary sewer facilities that exist today. The District operates under the Sanitary District Act of 1923, and is governed by rules and laws set forth in the Health and Safety Code of the State of California.

The District is governed locally by a five-member Board of Directors elected at the general elections in November. The Board of Directors is responsible for setting policy and general administrative procedures for the District. The policies and procedures set by the Board are then administered by the General Manager.

The continued growth and expansion of the Truckee area creates an opportunity for the District to provide increasing service to the public while seeking a delicate balance with the fragile environment.

This document constitutes a compilation of standards for sewer system design, development, repair, and construction, while guiding the development of new services, and guarantees continuance of excellent service to existing customers.

All requests for variances or deviations from these standards shall be submitted, in writing, by the owner to the General Manager prior to installation of the sanitary sewer facilities in question. It is incumbent upon the requestor to secure such written authorization to assume that authorization be forthcoming for any requested variances or deviations.

1.03 Revenue Program

The District may, by action of the Board of Directors, prescribe, revise, and collect fees, rates, or other charges for services and facilities furnished by the District in connection with its sanitary sewer system. Revenues derived by the District from these fees, rates, rentals or other charges for service or facilities may be used for any purpose except the acquisition or construction of additional local street sewers or laterals which are solely for private use.

The District is empowered with this authority in accordance with the Sanitary District Act of 1923, Health and Safety Code of the State of California, Section 6400 et seq. and other provisions of state law.

1.04 Scope

The provisions of the District Code shall apply to sewer construction, use, maintenance, discharge, deposit or disposal of all wastewater, both directly and indirectly into and through all of the District's sanitary sewer system, and to the issuance of permits and collection of fees, rates, and other charges.

2. GENERAL POLICIES

2.01 Dedication of Sanitary Sewer Facilities

New Facilities: Whenever new sanitary sewer facilities are to be dedicated to the District for operation and maintenance, the facilities shall be constructed and tested in accordance with the District Code requirements that are in force on the date the improvement plans were approved by the District, provided such construction is completed within 2 years of the plan approval date.

Improvement plans not completed within 2 years of the approval date, as indicated by the General Manager's dated signature on the plans, shall be updated to current District Code requirements.

Acceptance of dedication of new sanitary sewer facilities occurs after all District Code requirements and procedures are met as determined by the District. Dedication acceptance is approved by resolution, by the Board Directors. See Section 2.05, Extension of and/or Alterations to Sanitary Sewer Facilities, and Section A-7.7, Guarantee of Delivery and Title.

Existing Facilities: Existing sanitary sewer facilities to be dedicated to the District for operation and maintenance shall be repaired, upgraded and tested in accordance with the current District Code requirements.

Acceptance of dedication of existing sanitary sewer facilities occurs after all District Code requirements are met as determined by the District. Dedication acceptance is approved, by resolution, by the Board of Directors.

2.02 Annexation

Annexation is required for all areas outside of the District boundaries requesting to receive sanitary sewer service. Areas applying for annexation to the District shall be subject to Annexation Fees and Charges as outlined in Section 6.10. Upon annexation to the District, the area shall also be annexed to the Tahoe-Truckee Sanitation Agency (T-TSA) and be subject to T-TSA's rules, regulations, and charges. The District will not serve any area/parcel that is not fully within the District boundaries.

2.03 Disasters

Should a disaster occur, and the appropriate governing agencies deem a property uninhabitable, the District may elect to temporarily suspend user fees. The owner of an affected property involved may notify the District, in writing, and request a temporary suspension of user fees.

The District disaster policy allows for a maximum 4-year time period during which user fees will not be charged. However, user fees will be charged should the owner place a trailer on the parcel as a temporary hookup to the sanitary sewer system. See Section 7.18, Owner-builder Temporary Hook up to Sanitary Sewer. At the end of the 4-year time period, or at such time occupancy is granted on the property within the 4-year time period, user fees will resume.

The owner shall also be responsible for capping building lateral(s) on the property (at the owner's expense) as soon as this procedure can be safely completed. A District Inspector will witness the capping and install a seal cap and numbered seal on the lateral(s). The District may require a pressure test of the building lateral(s) prior to re-connection and seal cap removal in accordance Section 7.03, District Seal Cap.

This policy shall be implemented on a case by case basis only, under the direction and with the approval of the General Manager.

2.04 Authority to Receive District Services

The owner shall pay all the appropriate fees and/or deposits and have all necessary approval regarding sanitary sewer facility improvements prior to receiving services from the District. For the purpose of this section, "services" include, but are not limited to, issuance of a sewer permit, plan check review, field visits and inspections.

2.05 Extension of and/or Alterations to Sanitary Sewer Facilities

An owner may request an extension of sanitary sewer facilities and/or alterations to existing sanitary sewer facilities in order to obtain sanitary sewer service from the District. The owner shall be required to design and install, in accordance with District Code requirements, all such sanitary sewer facilities required by the extension and/or alteration.

The District, at its option; however, may require the owner to install sanitary sewer facilities with more capacity, of greater length, or of a different route than would be required for the service requested, (excess facilities). In such events, the District may reimburse the owner for the costs of such excess facilities if such excess facilities are required solely to benefit, improve or upgrade service to existing or other District customers.

If, however, such excess facilities are deemed necessary by the District for the orderly development of an integrated sanitary sewer system in the area of the proposed pipeline extension and/or alteration, the District may require the owner to design, install, and pay the cost of such excess facilities. Under such case, the owner may be entitled to reimbursement pursuant to "Reimbursement Agreements" as outlined on Section 2.05, Extension of and/or Alterations to Sanitary Sewer Facilities.

Dedication: If the sanitary sewer facilities installed under the premises described above are offered for dedication to the District, all requirements as specified in Section A-7.7, Guarantee and Delivery of Title, shall be met before the dedication is accepted by the District Board of Directors.

Specification and Fees: The size and location of the sanitary sewer facilities installed shall be specified by the District in writing. Type and quality of material used in the installation of the sanitary sewer facilities shall meet the requirements specified in Appendix A-7, District Standard Specifications. The installation of sanitary sewer facilities does not eliminate or affect the owner's obligation as to any other fee requirements as specified in this Code or as determined by the District.

Reimbursement Agreements: At the District's option, the District may, prior to dedication, enter into a written agreement with the owner whereby adjacent properties connecting to the sanitary sewer facilities installed by the owner, will be required to reimburse the owner, through the District, for a share of the cost for the sanitary sewer facility design and construction at a rate to be determined by the District.

Administration of reimbursement funds will continue until all such prorated shares have been paid, but not longer than a period of 10 years after dedication of sanitary sewer facilities.

2.06 Installation of Sanitary Sewer Facilities

It shall be the responsibility of the owner to obtain approval of all the appropriate agencies before commencement of construction of sanitary sewer facilities proposed for connection to the District sanitary sewer system. Procurement of approvals and/or permits from such agencies shall be the full responsibility of the owner.

Residential: A signed/issued building permit must be presented to District personnel in order to receive an Application for Sewer Permit.

Commercial: Submitted improvement plans will not be considered approved by the District or sewer construction authorized until such time that the General Manager signifies approval by letter or by dated signature.

There shall be no changes permitted to approved improvement plans unless such changes, corrections and/or additions are resubmitted to the General Manager for consideration and subsequent written approval. All changes, corrections and/or additions shall be noted, dated and initialed on the improvement plans as such by the owner.

2.07 Location

Location: Except as otherwise provided in this code, no plumbing system, drainage system, building sewer, private sewage disposal system, or parts thereof shall be located in any lot other than the lot that is the site of the building, structure, or premises served by such facilities.

2.08 Independent Systems

Independent Systems: Unless prohibited by state law, the drainage system of each new building and of new work installed in any existing building shall be separate and independent from that of any other building, and when available, every building shall have an independent connection with a public or private sewer. Exception: Where one (1) building stands in the rear of another building on an interior lot, and no private sewer is available or can be constructed in the rear building through an adjoining court, yard, or driveway, (as determined by the District) the building drain from the front building shall be permitted to be extended to the rear building.

2.09 Agent of Owner

The matters set forth in this Code to be performed by the owner may also be performed by the authorized agent of the owner. The District shall have the discretion to request written evidence that the owner has authorized the agent to act on the owner's behalf.

3. GENERAL PROVISIONS AND REGULATIONS

3.01 Validity of the District Code

If any part, section, subsection, paragraph, sentence, clause or phrase of the District Code is held invalid or unconstitutional for any reason by a court of law having jurisdiction, that decision does not affect the validity or constitutionality of the remainder of the District Code. The Board of Directors declares that it would have adopted each provision of the District Code irrespective of the validity of any other provision.

3.02 District Personnel Duties

Delegation of Authority: The General Manger shall administer, implement and enforce the provisions of the District Code. Any powers granted to or duties imposed on the General Manager may be delegated by the General Manager to persons in the employ of and/or acting in the general interest of the District.

Identification: All District personnel shall identify themselves upon request when entering the work site or property for any inspection of work or other purposes required or provided for by the District Code.

Access: The District or its authorized agents or employees shall have access at all reasonable times to enter the customer's premises for any purpose properly connected with the providing of sewer service, including inspections of the same to determine that the District Code and Ordinances are being observed.

No person shall place on any public sewer asset any obstructions, such as wires, fences, trees, or buildings, which may impede or otherwise interfere with the District's ready access to any portion of the sanitary sewer system owned by the District. Upon the District's written request, such obstruction shall be immediately removed by the owner at the owner's expense, or, at the District's option, shall be removed by the District at the owner's expense. If the owner wishes to reinstall the obstruction to its preexisting condition, the owner shall be responsible for all costs associated with its reinstallation. The reinstallation shall be subject to subsequent removals if access by the District is again required.

3.03 Sanitary Sewer Installation

Minimum Sanitary Sewer Facility Standards: Facilities shall be designed so as not to pollute underground or surface waters, or create a nuisance or menace to the public health or safety. The General Manager shall consult with the health officers and officials of public agencies, and from time to time, promulgate standards which may vary according to location, topography, physical conditions, and other pertinent factors.

Rain, Surface and Ground Water Drainage: No sump pump, runoff pool, receptacle, drainage area, or roof which receives or disposes of rain, surface or ground water shall be

connected to public sanitary sewer system directly, or indirectly through a private wastewater collection system.

Winter Construction: The District discourages the construction of sewer facilities when winter conditions exist. Determination of winter conditions shall be the sole responsibility of the District and will be made by the General Manager. The District shall post, at the District Administration Building and on the District website, notification of winter condition requirements at least two weeks before enforcement of these conditions begin.

During winter conditions, construction of sewer facilities shall abide by the following special requirements:

- An appointment is scheduled for a visual inspection in the A.M. hours, and
- Backfill material, in conformation with Section A-7.8, free of ice and snow, is used to fill the trench to within 12-inches of finished grade, with the remaining void to be filled with native material, and
- All directional changes (bends), thrust blocks, trench cut-off blocks, syphon breaks two-way cleanouts, and residential pump tank and connections must be left open for inspection and documentation.
- The trench is completely backfilled the same day as the initial visual inspection. This shall require another same day inspection to verify completion of backfill.

Notice of Noncompliance: Whenever any construction is being performed contrary to the provisions of the District Code, the General Manager shall issue written notice to the responsible party and to the property owner to stop work on that portion of the construction on which the violation has occurred. No work shall proceed on that portion until corrective measures have been taken and approved by the General Manager in writing.

Mandatory Sanitary Sewer Connections: All buildings within the District's service area requiring sanitation facilities, as defined in the Uniform Building Code and/or the District Code, shall be connected to the District sanitary sewer facilities when available.

Availability shall mean a public sewer with uncommitted capacity within 200 feet of the structure. The further maintenance and use of septic tanks, cesspools and other on-site waste disposal facilities contained on any property which services a building that is situated within 200 feet of a District sanitary sewer, with uncommitted capacity, are hereby declared a public nuisance pursuant to Government Code Section 54352 and must be connected to the sanitary sewer facilities.

No person shall cause or permit the disposal of wastewater or other liquid waste into any drainage system which is not connected to the public sewer when such connection is required by this section.

Connection to the District's sanitary sewer facilities shall be accomplished by the owner at the owner's sole risk and expense:

- Within 1 year (12 months), following written notification by the District, in the event the building is serviced by a septic tank or other on-site waste disposal system; or

- Before occupancy of a building occurs, in the event that the property is not previously serviced by a septic tank or other on-site wastewater disposal system.

The property owner shall at the owner's sole risk and expense remove from service and render harmless any and all septic tanks, cisterns, vessels, or similar underground vaults in accordance with County/Town Regulations, the Uniform Plumbing Code and any state law within 30 days following the date the dwelling is connected to the District's sanitary sewer facilities. District verification and approval is required for all abandoned on-site wastewater facilities (see Abandoned Sewers and Sewage Disposal Facilities, Section 7.19).

3.04 Multiple Units on Same Premises

To the extent not inconsistent with state law regarding accessory dwelling units, separate houses, buildings, living or business and commercial quarters, or adjoining premises under a single control or management may be provided with sewer service, at the discretion of the District, by any of the following means:

- Through separate service connection to each unit or combination thereof,

- Through a single service connection to supply the entire premises, or any combination thereof, or units thereon, in which case the combined rate or charge may be applied by the District; such combined rates or charges to be assumed by the applicant unless otherwise modified by agreement or by the District Code.

3.05 Joint Lateral Connections

A *private building lateral* used by two or more parcels is termed a "Joint Lateral." Requirements for drafting, executing, and recording a "Joint Lateral Agreement" between each of the parties sharing the private building lateral shall be as follows:

- New Construction Connecting to an Existing Private Building Lateral: Drafting, executing and recording of the Joint Lateral Agreement ***is required*** prior to final sewer inspection, and shall be the responsibility of the parties involved.

- Discovery of an Existing Joint Lateral Not Part of New Construction: Drafting, executing, and recording of the Joint Lateral ***is recommended*** and shall be the responsibility of the parties involved.

Through the Joint Lateral Agreement, the parties (owners) agree to share the operation, maintenance, and testing costs associated with the shared private building lateral. The Joint Lateral Agreement shall be written such that the agreement is binding upon the heirs, successors and assigns of each of the parcels involved.

Joint Lateral Agreements are not intended to serve tenants of shared-use facilities (common interest subdivisions, commercial shopping centers, mini malls, apartment complexes, condominium complexes, public schools, office buildings, and hospitals, etc.). See Section

10.06 for information on Shared-Use Facility Agreements and/or Private Maintenance Agreements.

3.06 Easement Abandonment

All persons requesting an abandonment of easement may incur a charge for the processing of said request. The charge will not exceed the actual expense to the District in researching and processing such request. A nonbinding estimate of expenses will be provided upon request to those desiring an abandonment of easement and such estimates shall be the basis of the required deposit.

3.07 District Records and Maps

The location shown on the Truckee Sanitary District's records, maps, record drawings, etc., are believed to be accurate. The District does not warrant that all facilities are located as shown, and does not represent that all facilities are, in fact, shown.

3.08 Liability for Damage to District Sanitary Sewer Facilities

Prior to and whenever any underground construction is to be performed, the owner of the site of the proposed excavation shall contact the District and review the appropriate record drawings on file at the District Office.

The owner responsible for the excavation shall:

- Call **Underground Service Alert** (811 or 1-800-227-2600) 48 hours prior to any start of excavation.

- Make such calculations, findings and conclusions as may be necessary to determine the approximate location of the District sanitary sewer facilities in relationship to the proposed excavation. In the event of conflicting positions, the District sanitary sewer facilities shall have prior rights to its location.

- Be responsible for the proposed excavation and shall explore for and expose the District sanitary sewer facilities using reasonable care. Once the District sanitary sewer facilities are exposed, the owner responsible for the excavation shall verify the clearances and compatibility of the proposed works.

- Be solely responsible for any and all damage to the District's sanitary sewer facilities regardless of the cause. This includes any resulting damage due to improper pipe protection and backfill procedures.

- Be responsible and liable for all costs, including staff time of inspecting, reviewing, and otherwise responding to, involved in the repair of damages to any District sanitary sewer facilities caused by the work.

3.09 Location of Points of Service Inconsistent with District Record Maps

It is the owner's responsibility, at the owner sole risk and expense, to expose the sanitary sewer stub out and determine adequate fall before installation of the building lateral and/or establishing the building finished floor elevation.

Whenever the stub out, wye or other point of service is not located as shown on the District's record drawings or record maps, the District shall assist the owner, to the extent reasonably possible after reasonable effort has been made by the owner to locate the stub out, in determining the location of the stub out, wye or point of service by use of surface and underground pipeline detector.

However, the District shall not be liable for the cost of equipment, excavation, time and/or labor expenses incurred by the owner in determining the location of stub-outs, service laterals, wyes or other District sanitary sewer facilities, whether existing or non-existing.

3.10 Non-existing Laterals, Wyes and/or Points of Service Shown on Record Maps

Before a stub out, wye or point of service which is shown to exist on District maps is determined to be "non-existent," the person attempting to locate the service lateral connection point shall contact the District for assistance. The District shall not be liable for any expense, equipment, excavation and/or labor incurred by any person in determining the existence or the "nonexistence" of any stub out, wye, point of service and/or other facility.

When the District has previously been provided with record drawings or record maps, and the General Manager has made a determination that no service lateral, wye or point of service exists as shown on the record drawings or record maps, the General Manager may, at the General Manager's sole discretion:

- Waive any applicable sewer main tapping fee.
- Install or cause to be installed a service lateral at the District's expense, provided there is a sewer main servicing the property with uncommitted capacity.

3.11 Time Limits

Any time limit provided for in the District Code may be extended by mutual written consent of both the District and the permittee or applicant, or other person affected.

3.12 Mobile Home Park/Campsite with Sewer Classification

Park Models that occupy non-residential sites within mobile home parks or campsites with sewer sites shall be classified as residential and charged as such. Recreational vehicles ("RV") or other similar trailers or vehicles designed for human habitation (collectively "vehicles") occupying non-residential sites within mobile home parks or campsites with sewer sites shall be classified as residential units and charged as such, if they have skirting, a roof, and/or a constructed entryway, or as determined by the General Manager.

Skirting is generally defined as rigid skirting constructed of wood, hard panel, Masonite, pressboard, or similar material surrounding the perimeter of a vehicle. Skirting shall generally not include vinyl, canvas, or other lightweight material or similar accessories commonly integral to a vehicle.

Roof is defined as a rigid structure constructed to be laced on or over the rooftop of a vehicle. Roof shall not include awnings, or other similar accessories integral to a vehicle, or protective covers placed over individual vents, skylights, etc.

Constructed entryway is defined as entry steps or an entry porch measuring greater than 20 square feet. Constructed entryway shall not include entry steps or small porches equal to or less than 20 square feet or include canvas or vinyl awnings which are integral to a vehicle.

Park Model is defined as a moveable cottage, home, or RV primarily designed for living quarters. Park Models typically do not exceed 400 square feet, are built on a single chassis and mounted on wheels. Unlike conventional RVs or trailers, Park Models are generally not designed to be pulled down the highway behind vehicles.

4. APPLICATION FOR SEWER PERMIT, RESIDENTIAL

4.01 "Will Serve Letter"

A "Will Serve Letter" for an individual parcel may be issued by the District at the written request of the owner. The purpose of the "Will Serve Letter" is to provide an owner assurance that the District expects to have sufficient capacity to provide sanitary sewer for the proposed residential project on the parcel. Each "Will Serve Letter" is issued based on a "statement of facts" provided by the owner on the date of that issuance. The statement of facts is simply the planned use of the parcel with respect to sanitary sewer flows, including type, concentration, and amount of waste to be discharged into the District's sanitary sewer system.

Any change in the statement of facts from the date the "Will Serve Letter" was issued may impose a different or greater demand upon the District's sanitary sewer system. The District shall be notified of any change in the statement of facts. Failure to do so is a violation subject to penalties as provided by Section 6523 of the Health and Safety Code.

The "Will Serve Letter" for sewer availability, in addition to all other terms and conditions required by the District, shall not provide any unconditional guarantee, priority or reservation of capacity, but requires that the owner or subsequent purchaser must provide information and sign a Request for Service and Receipt for Collected Fees and Deposits for the purpose of acquiring an Application for Sewer Permit prior to initiation of any sanitary sewer improvements. The receipt of a "Will Serve Letter" provides that such Application for Sewer Permit will be issued by the District solely upon a first come, first served basis and only to the extent there is then remaining available capacity in the physical facilities for conveyance and treatment. The "Will Serve Letter" also provides that District services such as plan check review, field visits, and inspections will be authorized only after an Application for Sewer Permit has been issued, and only upon payment of all the applicable deposits, fees and charges and in accordance with and subject to all the applicable District requirements.

4.02 Application for Sewer Permit

The owner desiring to connect to the sanitary sewer shall be required to provide, in person, utility plans, finished-floor elevations, information and sign a Receipt for Collected Fees and Deposits for the purpose of acquiring an Application for Sewer Permit. The District shall provide the Application for Sewer Permit, indicating thereon the information to be furnished by the owner. The District may require, in addition to the information furnished by the permit form, any additional information, specifications, and improvement plans from the applicant which will enable the District to determine that the proposed work or use complies with the provisions of the District Code.

It is the owner's responsibility to advise the District of any change in mailing address at any time.

All applicable fees and deposits are required upon submittal of an Application for Sewer Permit.

The Application for Sewer Permit must be made by the owner. A valid, signed building permit for the permanent residence (including a long term mobile home), issued by the appropriate agency, is required upon submittal of an Application for Sewer Permit.

The owner of a single family residential unit structure may choose to install the building lateral and corresponding sanitary sewer facilities before a valid, signed building permit is issued by the appropriate building authority and before Application for Sewer Permit through the District's Preliminary Sewer Lateral Inspection Program as defined in Section 7.02, Preliminary Sewer Lateral Inspection Program.

An Application for Sewer Permit shall be issued on a first come, first served basis, and shall be valid for two years.

Except by special written agreement with the District, no customer or user of the District's sanitary sewer system shall connect, or allow any other person to connect additional sanitary sewer facilities other than those specified in the statement of facts and/or the Application for Sewer Permit.

4.03 Excessive Projected Waste Flows

Any owner proposing to have wastewater discharged from any property to the District's sanitary sewer system in quantities, or at a rate greater than the capacity for which the sewer was designed, when such additional quantity will immediately overload the sewer, shall be denied the right to discharge more than the proportionate share allotted to the property. If, however, the capacity will not be exceeded immediately, but will be exceeded sometime in the future, the General Manager may enter into a written agreement with the property owner to permit such connection to the sewer. Such agreement shall be in a form acceptable to the District and shall be recorded and include, at a minimum:

- A covenant requiring the owner to construct, cause to be constructed, or share in the cost of constructing improvements to the sewer system in order to enlarge the capacity of the sewer at such future time as the General Manager determines.

- A provision binding subsequent owners of the property.

- A bond or other form of security acceptable to the General Manager to guarantee compliance with the terms of the agreement.

5. APPLICATION FOR SEWER PERMIT, COMMERCIAL

5.01 "Will Serve Letter"

A "Will Serve Letter" for an individual parcel may be issued by the District at the written request of the owner. The purpose of the "Will Serve Letter" is to provide an owner assurance that the District expects to have sufficient capacity to provide sanitary sewer for the proposed commercial project on the parcel. Each "Will Serve Letter" is issued based on a "statement of facts" provided by the owner on the date of that issuance. The statement of facts is simply the planned use of the parcel with respect to sanitary sewer flows, including type, concentration, and amount of waste to be discharged into the District's sanitary sewer system.

Any change in the statement of facts from the date the "Will Serve Letter" was issued may impose a different or greater demand upon the District's sanitary sewer system. The District shall be notified of any change in the statement of facts. Failure to do so is a violation subject to penalties as provided by Section 6523 of the Health and Safety Code.

The "Will Serve Letter" for sewer availability, in addition to all other terms and conditions required by the District, shall not provide any unconditional guarantee, priority or reservation of capacity but requires that the owner or subsequent purchaser must provide information and sign a Request for Service and Receipt for Collected Fees & Deposits prior to initiation of any sanitary sewer improvements. The receipt of a "Will Serve Letter" provides that such Request for Service and Receipt for Collected Fees & Deposits will be issued by the District solely upon a first come, first served basis and only to the extent there is then remaining available capacity in the physical facilities for conveyance and treatment. The "Will Serve Letter" also provides that District services such as plan check review, field visits, and inspections will be authorized only after a Request for Service and Receipt for Collected Fees & Deposits has been issued, and only upon payment of all the applicable deposits, fees and charges and in accordance with and subject to all the applicable District requirement..

5.02 Application for Plan Check Review

The owner desiring to connect to the sanitary sewer shall meet the requirements of Plan Check Review as outlined by the District. The District shall provide a Plan Check Review checklist form, indicating thereon the information to be furnished by the applicant. The District may require, in addition to the requirements of the printed form, any additional information, specifications, and improvement plans from the applicant which will enable the District to determine that the proposed work or use complies with the provisions of the District Code.

It is the owner's responsibility to advise the District of any change in mailing address at any time.

A Plan Check Review deposit, as outlined in Appendix A-1, is required upon submittal of project plans. One set of project plans, showing all proposed sanitary sewer facilities, as well as a completed Commercial Project Application Form, are required for Plan Check Review.

A Request for Plan Check Review shall be issued on a first come, first served basis. Project improvement plans approved as acceptable to District Code requirements within Plan Check Review are authorized for construction provided all deposits, fees, and charges are paid as detailed on Appendix A-1, A-2, A-3, A-4 and A-5

Project improvement plans approved by the District that are not constructed within 2 years of signature approval by the General Manager shall be subject to existing District Code requirements and may require additional Plan Check Review by the District.

Any change in the drawings with respect to the sanitary sewer after Plan Check approval is granted involving design changes to the sanitary sewer system, more construction, or an increase in the number of units, hookups, taps, or fixture units than that for which the Plan Check approval was issued shall be considered an unauthorized usage and is prohibited until an additional review is completed, permission to proceed is granted, and all appropriate deposits, fees and charges are paid.

Except by special agreement with the District, no customer or user of the District's sanitary sewer system shall connect, or permit any other person to connect additional sanitary sewer facilities other than those authorized within the Plan Check Review process.

5.03 Transfer of Title of a Partially Completed Project

A person or party to which Plan Check approval has been issued may transfer title of a partially completed project to another person or party solely for the same lot or premises for which the Plan Check approval was issued, subject to all terms and conditions under which the Plan Check approval was issued. The transferee shall meet all requirements of the District relating to the transfer. The usage of Plan Check approved improvement plans for a lot or premises other than the lot or premises for which the approved improvement plans were issued shall be considered an unauthorized usage and is prohibited.

Upon transfer of title, any unused project deposit (estimated connection, inspection, and seal cap) shall be refunded to the person or party who paid the project deposit. The new person or party taking title, subject to the terms and conditions of original plan check approval, shall pay all deposits, fees and charges required by the District.

Prior to the transfer of title for the same lot or premises, the District shall inspect the lot or premises for which the Plan Check approval was issued. The purpose of this inspection shall be for the District to verify that the amount of construction and the number of units, hookups, taps, fixture units and facilities had not increased from that authorized by the Plan Check approval.

The District may require that the permittee or applicant first provide a revised set of improvement plans showing the different design and pay all deposits, fees and charges required by the District. These requirements are in addition to other requirements or limitations imposed upon the usage of permits as set forth in the District Code.

5.04 Excessive Projected Waste Flows

Any owner proposing to have wastewater discharged from any property to the District's sanitary sewer system in quantities, or at a rate greater than the capacity for which the sewer was

designed, when such additional quantity will immediately overload the sewer, shall be denied the right to discharge more than the proportionate share allotted to the property. If, however, the capacity will not be exceeded immediately, but will be exceeded sometime in the future, the General Manager may enter into an agreement with the owner to permit connection to the sewer. Such agreement shall be in a form acceptable to the District and shall include, at a minimum:

- A covenant requiring the owner to construct, cause to be constructed, or share in the cost of constructing improvements to the sewer system in order to enlarge the capacity of the sewer at such future time as the General Manager determines.

- A provision binding subsequent owners of the property.

- A bond or other form of security acceptable to the General Manager to guarantee compliance with the terms of the agreement.

5.05 Large Land Developments

Large land developments that require connection to the District's sanitary sewer system may require the owner to enter into an improvement agreement with the District outlining the terms and conditions applicable to the particular project.

5.06 When Application for Sewer Permit Not Required

The provisions of this section requiring an Application of Sewer Permit shall not apply to sewer contractors constructing public sewers and appurtenances under contracts awarded by the Board of Directors.

5.07 Shared-Use Agreement

Prior to providing final approval from the District to the Town of Truckee or appropriate county, the District will require the owner of a Shared-Use Facility (common interest subdivisions, commercial shopping centers, mini malls, apartment complexes, condominium complexes, public schools, office buildings, and hospitals, etc.) to sign a Shared-Use Facilities Agreement for the maintenance and testing of sanitary sewer facilities as outlined in Section 10, Maintenance of Existing Facilities, and Section 10.06, Shared-Use Facility.

5.08 Private Sewer Maintenance Agreement

Prior to providing final approval from the District to the Town of Truckee or appropriate county, the District may require the owner of a Private Maintenance Facility (Manufactured/Mobile Home Park, School Complexes, single owner office building, etc.) to sign a Private Sewer Maintenance Agreement for the maintenance and testing of sanitary sewer facilities as outlined in Section 10, Maintenance of Existing Facilities, and Section 10.07, Private Sewer Maintenance Agreement.

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6. FEES AND CHARGES

6.01 Deposits and Refunds

Any owner requesting permission to construct facilities in accordance with Sections 4 and 5, shall pay fees and deposits in advance to the District to cover actual fees, charges and costs to be incurred by the District that are associated with the permitting process and the construction of sanitary sewer facilities in accordance with the District Code, and as detailed in Appendix A-1, A-2, A-3, A-4 and A-5.

The fees and deposits received by the District for services as provided by the District Code shall be identified by applicant and by project. The status of the funds on deposit shall be reconciled periodically by the District and copies of such reconciliation shall be made available to the applicant upon request. It is the intent of the District to maintain a positive balance in the applicant's project deposit account. In the event of a pending or projected shortfall, the District shall provide written notice to the applicant stating the amount of supplemental deposit that must be provided and terms or conditions that may, in the opinion of the General Manager, be appropriate.

All amounts on deposit on an account are available to pay any balance due. The unused funds remaining on deposit with the District shall be returned to the original payer without interest, upon completion of plan check review, connection to the District sanitary sewer system, or cancellation of the permit. In the event the District is unable to refund to the original payer, the refund will be made to the property owner of record and any balance due will be billed to property owner of record.

6.02 Residential Plan Checking and Inspection Fees

No fees are charged for any review of improvement plans and/or specifications for a single family residential connection; however, improvement plans, site plans, utility plans and floor plans must be made available at time of issuance of permit. Inspections are charged as outlined in Appendix A-1, with a minimum of one inspection fee deposited in advance with the Application for Sewer Permit.

6.03 Commercial Project Application Fees

Plan Check Review: The District shall review the improvement plans, with respect to the sanitary sewer, of all proposed commercial projects. This includes, but is not limited to, proposed subdivisions, retail businesses, apartments, condominiums, office buildings, motels, food establishments, etc.

Prior to Application for Sewer Permit for a commercial project, the applicant shall submit one set of improvement plans (applicable sheets that contain the proposed sanitary sewer facilities copied from the plan originals) to the District for Plan Check Review to assure compliance with District requirements. Prior to the District performing the Plan Check Review, the applicant

shall submit a Commercial Project Application, and pay a deposit to the District as specified in Appendix A-1, of the District Code from which Plan Check Review fees will be charged.

Commercial Project Fees and Deposit: After Plan Check Review has been completed and approval of the improvement plans for sanitary sewer facilities have been granted, the applicant shall:

- Provide the District with a signed Grading Permit or Building Permit issued by the appropriate agency, and

- Deposit with the District a sum of money estimated by the General Manager to cover the cost of construction inspection, testing of materials, processing of design revisions, procuring or preparing record improvement plans, estimated connection fees, user fees, assessments, related construction activities, automobile mileage, and all overhead and indirect costs.

- Provide the District an electronic version, as approved by the District, of the improvement plans.

The Grading Permit or Building Permit shall be submitted to the District, and the Commercial Project Deposit shall be paid prior to inspection of the sanitary sewer facilities by District personnel. The General Manager's estimate shall be based on the best information reasonably available, including the owner's and the owner's engineer's estimate of the cost of the facilities to be constructed. The deposit estimated by the General Manager will be based on reasonable periods of time for the completion of the work.

The Application for Sewer Permit is issued upon payment for the Commercial Project Deposit.

6.04 Connection Fees

Payment of sewer connection fees is the responsibility of the owner of the property, regardless of who is deriving benefit from, submitting payment for, or receiving sewer service as a result of the connection. Connection fees are nonrefundable unless the Application for Sewer Permit is canceled prior to final connection approval by the District.

- Residential connection fees are determined in accordance with Appendix A-2. Initial connection fees are due and payable upon Application for Sewer Permit. Additional connection fees shall be assessed for any increase thereafter in the factor rating of the property.

- Commercial and industrial connection fees shall be determined in accordance with Appendix A-1, A-2, A-3, A-4 and A-5. Estimated connection fees are based on the factor rating as determined by the Plan Check Review. Appendix A-2, equates a single family living unit to 15 plumbing fixture units. Initial connection fees are included in the Commercial Project Deposit. Additional connection fees shall be assessed for any increase thereafter in the factor rating of the property.

Buildings which existed within the boundaries of the District on or before April 15, 1977, and were served by septic tanks until tied into the system, will be exempt from the regular connection fee applicable at the time the building is connected to the system for the factor rating, at the time

of connection. This exemption is provided only when such connection is made within 1 year from the time sanitary sewer service becomes available to the property. An accessible sewer within 200 feet of the structure will generally fulfill the definition of availability. The sewer allocation provided for such buildings is neither refundable nor transferable.

6.05 Assessments

Specific parcels of land within the District may be included in Special Assessment Districts and Benefit Assessment Areas formed to finance or to buy-back the costs for the sanitary sewer facilities serving said parcel(s). Parcels within the area to be serviced are evaluated and assigned "Equivalent Dwelling Unit" (EDU) factors, from which design and capacity is determined. By District standards, an equivalent dwelling unit is a sewer service that provides domestic strength wastewater at a rate not exceeding 230 gallons per day. An equivalent dwelling unit may also be defined as the Nevada County permitted land use of any given parcel expressed in single family densities.

Parcels may be assessed, based on buildable acreage and the number of EDU's the parcel could support as indicated by the zoning.

6.06 Billing of Sewer User Fees

Each lot or premise connected to the sanitary sewer system and each owner or customer receiving sewer service from the District shall pay periodic user fees in accordance with the current Truckee Sanitary District User Fee Schedule (Appendix A-3). These schedules provide an appropriate additional administrative and overhead charge for users from whom the District does not receive property tax funds.

All sewer user fees may be billed on the same bill and collected together with fees and charges for any other District services. Except as provided herein, estimated user fees are included in the Application for Sewer Permit deposits.

It is the owner's responsibility to advise the District and the County Tax Collector of any change in mailing address.

6.07 Collection of Sewer User Fees on Tax Roll

Pursuant to applicable law, the District method for the collection of sewer user fees, prescribed or imposed, for each fiscal year (July 1 through June 30) is to follow a practice of collection on the County tax roll in the same manner, by the same persons, and at the same time, together with and not separately from, its general taxes.

These fees will be applied as prescribed or imposed by the provisions of this Code and collected on the tax roll in accordance with applicable law.

Once the transfer of amounts has been turned over to the County office for collection, no payment shall be received by the District on said amounts except as paid to the District by the County.

6.08 Omission from Collection on Tax Roll – Direct Billing

If the sewer user fees are, for any reason, not collected in accordance with the provisions of the section above (Section 6.07, Collection of Sewer User Fees on Tax Roll), such property owners will be directly billed semiannually in advance, on January 1 and July 1 of each year, and all charges and fees shall become due and payable 30 days from the date of that billing statement. Each owner shall be liable to the District for payment of sewer charges and fees. It is irrelevant whether service is provided through an individual service lateral or multi customer service lateral, or who derives the benefit from, submits payment for, or receives the sewer service as a result of the connections. The property owner is responsible for making timely payment to the District.

6.09 Delinquent Accounts

In the event of delinquency, a ten percent (10%) penalty shall be added to the balance due. The District shall include a statement on its bill to each customer or owner or shall provide such statement to each owner by any other means, that any charges remaining delinquent for a period of 30 days shall constitute a lien against the lot or parcel of land against which the charges are imposed.

The District may elect to send a composite bill to the County or groups of customers when each of the following conditions are met:

- The owners to be billed as a group own lots or premises in a multi-unit living building.
- The owners have formally organized in writing into a homeowner's or similar association.
- The homeowner's or similar association, through properly executed covenants, conditions, articles of incorporation or by laws, has the power to act as the sole agent for the owners concerning sewer charges in a manner which binds individual owners.

Providing the above conditions are met, the District may bill to and the association shall pay all delinquent penalty and interest charges on the composite bill. The composite bill or other notices to the association shall constitute a bill or other notice to each individual owner or customer, who shall agree that no other notice or bill to individual owners or customers shall be necessary for, or a prerequisite to, the District's exercise of its powers to terminate service, or place liens on each owner's property or exercise other legal remedies necessary to collect delinquent bills and charges. The composite bill shall consist of the sum of the total charges for each owner or customer represented by the association. Service to a common area shall be treated as service to a single parcel for billing purposes.

The District shall provide Notice of Public Hearing pursuant to applicable law to each affected owner. After Public Hearing the District will request, by resolution, that the County include the amount of said delinquencies on the property tax bill against the respective lot or parcel. Once the transfer of delinquent amounts has been turned over to the County for collection, no payment shall be received by the District on said delinquent amounts except as paid to the District by the County.

6.10 Annexation Fees and Charges

Annexation fees and charges as detailed in Appendix A-1, are required for all areas outside of the District boundaries applying for annexation to the District on or after the effective date of the District Code.

The annexation fees shall be due and payable at the time the completed Annexation Application packet is received by TSD for review. Non-monetary conditions of annexation shall be specified in an annexation agreement executed between the owner(s) and the District prior to the Local Agency Foundation Commission hearings and approval of the proposed annexation.

The owner or their successor in title or interest of any such parcel or lot as herein described shall be responsible for payment of the annexation fee provided in this section.

The Clerk or other designated official of the District shall record the payment of all such annexation fees and shall record the name of the payer and a description of the parcel to which such payment is applicable. A record of all such payments shall be maintained by the District, including the date and amount of payment, the name of the payer, their mailing address, and a description of the parcel, or lot, to which such payment or payments are applicable.

6.11 Fees for Preparing and/or Reviewing Special Documents

Before proceeding with the preparation of any special study, Environmental Impact Report, or related document, the General Manager shall collect from the person making the request a deposit in the amount determined by the General Manager to be fair and equitable. If, after the fee is paid, a change in the study or documents is requested which will increase the cost to the District, supplemental fees shall be collected in the amount of the estimated additional cost.

6.12 Penalties on Unpaid Connection Fees

In the event that any connection fees are not paid within 30 days of the date of invoice, a basic penalty of ten percent (10%) shall be added to such unpaid connection fees. The owner may request, in writing, to extend payment of additional connection fees over a twelve (12) month or lesser period. The request may be granted at the General Manager's sole discretion.

6.13 Delinquent Account Penalty Fee

Any owner whose account is found to be delinquent shall be assessed a basic penalty of ten percent (10%) of the delinquent amount.

6.14 Returned Check Fee

A return check fee (Appendix A-1) shall be required by the District for each check tendered as payment to the District that is returned unpaid. Future payments made to the District may be required to be in the form of cash, a Cashier's Check or a money order.

6.15 Billing Basis for User Fees

The District shall bill for User Fees, based on the billing factor units of the user as determined by the General Manager, and in accordance with Appendix A-3, and A-4.

6.16 Initial Billing of User Fees

User fees shall be based on estimated flow derived from information supplied on the Application of Sewer Permit and additional information as may be available to the General Manager. Billing shall commence on the first day of the month following the date that the seal cap is removed by authorized District personnel and/or the sewer connection is inspected and approved by the District, or when usage commences, whichever occurs first.

6.17 User Fee Billing Adjustments

An adjustment of user fee charges will be made when the District is notified of a change in use when the District discovers a change or when a change is made. Any amount paid in excess of the actual computed user fee charge shall be credited against the account. Any deficiency in the amount paid and the actual computed user fee charge shall be added to the account.

Deficiencies or credits may not be made for a period more than 2 years prior to the date the General Manager determines that a billing discrepancy exists, except in the event of an unreported connection or discharge, in which case all charges and fees shall be assessed under Section 6.19, Unreported Connections and Discharges.

Periodically, there are changes in the sewer use of property which affects the factor rating. The District will notify the owner in writing of these changes and of any possible reduction or increase in the factor rating.

- Increased Factor Rating: The owner, upon written notification by the District of an increase in the factor rating, may choose to remove the additional plumbing fixtures to avoid increased connection and user fees. Removal of the additional plumbing fixtures must be completed by the owner and verified by the District within 30 days of the written increased factor rating notification.

- Reduced Factor Rating: The owner may elect to pay lesser user fees for the lower factor rating by signing an Agreement for the Reduction of District Factor Rating. In accordance with this agreement, the factor rating for the property shall be reduced and all rights to the allocations which have been reduced shall be forfeited by the owner.

- Connection fees shall be assessed for any increase hereafter in the sewer capacity requirements of the property which is represented by any subsequent increase in its factor rating. The owner may elect to continue paying the user fees for the higher factor rating of a property with no reduction and thereby not forfeit all rights to the allocations for the higher factor rating.

In the event of a disaster, adjustments to billing may be made as specified in Section 2.03, Disasters.

6.18 Collection Remedies

Remedies for collecting and enforcing user fees and connection fees set out by the District Code are cumulative. Any and all remedies may be used alternatively. None of the remedies are exclusive.

Delinquent charges for sanitary sewer service together with all penalties thereon, when recorded pursuant to applicable law shall constitute a lien upon the real property served and such liens shall continue until the charges thereon and penalties thereon are fully paid or the property sold therefore in the manner more particularly provided for state statute.

Delinquent charges for sanitary sewer service together with penalties thereon, which remain delinquent as of June 30 of each year, shall be collected in the same manner as the general property taxes within the District for the forthcoming fiscal year provided that the District shall give notice as provided by law.

Delinquent charges, together with all penalties thereon, may be collected by an action in any court of competent jurisdiction against a person or persons who owned the property when the service was rendered.

An action may be instituted in any court of competent jurisdiction to enforce any lien on the land for the user fees and connection fees together with all delinquent charges and penalties thereon.

Reasonable attorneys' fees and court costs of any action in any court for collection of user fees, together with any penalties thereon, or for a preliminary or permanent injunction, or for the issuance of an order stopping or disconnecting sanitary sewer service, or to enforce a lien, shall be an additional charge for such sanitary sewer service.

If sanitary sewer service is furnished by the District to the real property and is disconnected for unpaid charges, re-connection shall not be made until all user fees and connection fees including penalties and disconnection and re-connection charges have been paid to the District.

6.19 Unreported Connections and Discharges

An unreported connection is a connection on a property which has not been inspected and approved by the District. An unreported discharge is a discharge on a property connected to the District's sewer system that increases the type or quantity of connections for which all applicable fees and charges have not been paid.

Upon discovery of an unreported connection or unreported discharge, the property owner will be invoiced and shall be responsible for immediately paying all connection fees and charges along with user fees retroactive to the date of the unreported connection or discharge consistent with the type and quantity of unreported connections or discharges made. Connection and user fees shall be at the current rate of the District at the time of discovery. The property owner shall also be subject to penalties thereon. Failure to make timely payment may result in enforcement action up to and including the discontinuance of service.

In some extenuating circumstances, connection fees may be disregarded and user fees may be charged for not more than a period of 2 years. This policy shall be implemented on a case by case basis only, under the determination of the General Manager.

6.20 Public Schools

Sewer flows from the public schools in the District are proportional to the number of students in attendance each day multiplied by the number of days those students attend (student-days) and also proportional to the ages of the students attending. The District estimates the flow from public schools as follows:

- K through Grade 5: 7 gallons/student-day
- Grades 6 through 8: 12 gallons/student-day
- Grades 9 through 12: 15 gallons/student-day

Charges for public schools are calculated by multiplying the number of students by the number of days attended. This number is multiplied by the appropriate student age flow factor (above) times a rate per gallon flow (see Appendix A-3, Truckee Sanitary District User Fee Schedule).

Each school will maintain records of student-days during a complete fiscal year, beginning on May 1st, and shall report those numbers to the District by June 30th of the following year. Charges will be due and payable thirty days from the billing date.

For any school that does not provide such information to the District by June 30th of each year, the District shall notify the school in writing, whereupon the school shall have thirty calendar days to provide this information to the District. If the District does not receive the required information within this 30 day period, the District shall have the discretion to set the fee based upon information available.

7. INSTALLATION OF SANITARY SEWER FACILITIES

7.01 Connection Policy

Connection of any residential or commercial structure to the District collection system is not authorized until the following conditions are met:

- An Application for Sewer Permit shall be completed and filed with the District as outlined in Sections 4 and/or 5, as appropriate.

- Deposits are paid to the District in the amount specified by Appendix A-1.

- The building lateral and corresponding sanitary sewer facilities must be installed, backfilled, and pressure tested in accordance with District Code requirements, which include

    - A visual inspection of the pipeline prior to backfilling (see Section 7.09).

- The building lateral must be sealed with a District furnished seal cap and numbered seal. ***Important, see Section 7.03, District Seal Cap, concerning removal of the numbered seal and seal cap.***

- The location of the seal cap shall be reasonably accessible by District personnel. Seal caps which are unreasonably obstructed by construction debris, structural features, or lack of space will not be removed until accessibility is improved.

- The seal cap shall not be removed from the building lateral until the following conditions are met:

    - The building lateral has passed a pressure test and been televised (Section 7.13 and 7.14). The pressure test and television inspection will not be allowed until the property has passed the Final Grading Inspection from the Town or appropriate County Building Department. The cost of the pressure test and television inspection is the responsibility of the owner and must be witnessed by a District Inspector.

    - The structure has passed the Drywall Nailing Inspection from the Town or appropriate County Building Department.

    - All test/flush water is removed from the building waste piping and disposed of to an area other than the sanitary sewer.

Property owners seeking a temporary certificate of occupancy prior to the completion of all the above steps must request a variance from the District in writing. Said request will be reviewed by the General Manager. Approval or rejection shall be at the General Manager's discretion on a case-by-case basis.

Winter Construction requirements, if applicable, shall be completed as outlined in Section 3.03, Sanitary Sewer Installation.

7.02 Preliminary Sewer Lateral Inspection Program

In certain situations the owner of a building may choose to install the building sewer lateral and corresponding sanitary sewer facilities before issuance of the Building Permit and District Sewer Permit, as outlined in Section 4.02, Application for Sewer Permit.

Under this option, the building sewer lateral and corresponding sanitary sewer facilities may be installed, inspected and backfilled for an initial pressure test if the District is in receipt of a signed Preliminary Lateral Inspection Agreement which requires the following conditions to be met by the owner:

- Provide an issued Utility Permit from the Town of Truckee or County of Placer
- Provide a site plan that shows sewer connection point and location of building sewer lateral, driveway location, elevation and invert elevation of house cleanout and property line connection, and location of other underground utilities
- Understands obligation to reinstall lateral if approved building plans require alteration of the lateral and agree not to request a variance
- Makes payment of Inspection Fee
- Makes payment of Residential Permit Deposit
- Makes payment of Preliminary Sewer Lateral Agreement Fee (see Appendix A-1)
- Makes payment of Preliminary Sewer Lateral Agreement Deposit. Deposit may be used by the District to disconnect building lateral at the property line if a Building Permit is not provided to the District within 90 days. Time limit may be extended on a case-by-case basis at the discretion of the General Manager.

7.03 District Seal Cap

The installation of a numbered seal cap by District personnel is required to prevent debris and unmonitored flows from entering the sanitary sewer system. Special consideration for Slab-on-grade construction will need to be approved by General Manager.

The location of the seal cap shall be reasonably accessible by District personnel. Seal caps which are unreasonably obstructed by construction debris, structural features, or lack of space will not be removed until reasonably accessible.

User fees will begin upon removal of the seal cap by District personnel. See Section 7.01, Connection Policy for conditions required prior to the removal of the seal cap by District personnel.

WARNING: ONLY TRUCKEE SANITARY DISTRICT PERSONNEL ARE AUTHORIZED TO BREAK THE NUMBERED SEAL AND REMOVE THE SEAL CAP.

If the District seal is broken, and/or the seal cap removed, the sewer lateral must be retested before final approval is given. Any tampering with the District numbered seals or any unauthorized seal cap removal will be subject to a charge as specified in Appendix A-1. **This charge is strictly enforced.** Each seal cap is equipped with a numbered seal and instructions warning of its unauthorized removal.

WARNING DO NOT REMOVE
UNAUTHORIZED REMOVAL SUBJECT TO
$1000.00 CHARGE
FOR REMOVAL PLEASE CALL
TRUCKEE SANITARY DISTRICT
(530) 587-3804

It is the owner's responsibility to contact the District to schedule removal of the seal cap by an authorized agent of the District.

In the event the sanitary sewer facilities have not been approved within the time period of the permit or Preliminary Sewer Lateral Agreement, and an extension of the permit or agreement is not requested, the owner will forfeit their seal cap deposit. The sewer lateral may be disconnected from the sewer main as deemed necessary by the District. If the sewer lateral is disconnected, a retest of the building lateral will be required before reconnection. Additional inspection fees will be required.

If, for any reason, the Sewer Permit is canceled prior to the final connection, the sewer pipeline shall be disconnected, either by the owner or the District. If the District disconnects the lateral, the owner will be charged for all work incurred by the District for said disconnection. Such charges will be deducted from any funds remaining with the District.

7.04 Responsibility for Building Lateral Installation

It shall be the responsibility of the owner to install all building lateral pipelines and appurtenances from and within the premises of the owner to the service connection pipeline provided by the District.

Unless otherwise agreed by the District, all building lateral pipelines and related appurtenances within the premises of the owner shall be installed at the owner's expense.

7.05 Size and Type of Building Laterals

Building lateral pipelines connecting to the District's sewerage works shall meet the requirements listed below and the criteria listed in Appendix A-6, and Appendix A-7.

Residential Building Laterals: The diameter of gravity building laterals shall not be less than the pipeline diameter exiting the structure, or less than 4 inches for a single residence or two residences. A 6-inch diameter pipeline or larger shall be used for more than two dwelling units.

Commercial Building Laterals: The minimum pipeline diameter for new gravity building laterals shall not be less than 6 inches. Existing 4-inch building laterals proposed for commercial use shall be tested in accordance with Section A-7.10. If the existing 4-inch building lateral fails

the test, the entire 4-inch pipeline shall be removed or abandoned and the commercial building lateral shall be upgraded to a 6-inch diameter pipeline.

Appropriate fittings shall be used in connecting to the service connection provided by the District. On double sewer services, both wyes shall be uncovered prior to connection to the system for District inspection and the appropriate wye shall be used.

Joints in all building laterals shall be of a gasket collar type as recommended by the manufacturer and shall pass the District's inspection and required tests. Glued fittings shall not be accepted.

7.06 Trench Requirements

All trenching for building lateral and service lateral pipeline installation shall be performed in accordance with the California Occupational Safety and Health Act. All trenches shall be excavated and backfilled in accordance with the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16, or 17.

7.07 Minimum Pipeline Cover Requirements

A minimum of 30 inches compacted earth fill, meeting District requirements as outlined herein, shall cover all gravity and force building and service laterals. Cover less than 48 inches in vehicular traveled ways requires heavier walled pipe as listed in Appendix A-6.

7.08 Minimum Slope Requirements

Residential Building Laterals: Trenches shall be on an even grade with a minimum slope of 0.0208 (1/4 inch fall per linear foot) for 4-inch diameter pipeline and 0.0050 (1/16 inch fall per linear foot) for 6-inch diameter pipeline. Holes for connecting pipe collars shall be dug so that each joint of pipe will have an even bearing over 6-inches of sand bedding placed on the trench bottom.

Commercial Building Laterals: Trenches shall be on an even grade with a minimum slope of 0.0050 (1/16 inch fall per linear foot) for 6-inch diameter pipeline. Minimum slopes for pipelines greater than 6 inches in diameter are listed in Appendix A-7.

7.09 Backfilling Building and Service Laterals

The native soil in the trench bottom shall be compacted to 90 percent relative compaction before placement of pipe zone backfill for pipeline bedding. Backfill shall meet the gradation requirements listed in Appendix A-7, Section A-7.8. It is recommended that Class 1 Backfill material have a specific gravity of at least 2.5 to assure proper compaction. Class 1 Backfill bedding material shall also be compacted to a relative compaction as specified in the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16 or 17, before laying the pipeline. Class 3 Native Backfill may be substituted for Class 1 Backfill if the substitution is approved by the District Inspector **prior** to installation of the building lateral and placement of the Class 3 Native Backfill.

The new building and service laterals shall be visually inspected by a District inspector prior to backfilling above the spring line. After the visual inspection by a District inspector, the trench shall be backfilled. All trenches for building and service laterals shall be backfilled in accordance with the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16 or 17.

Materials for Class 1, Class 2, Class 3, and Class 4 Backfill, as listed in Appendix A-7, Section A-7.8, shall be placed in uniform horizontal layers not exceeding 0.67 feet in thickness before compaction, and shall be brought up uniformly on all sides of the trench.

Each layer of backfill shall be compacted to a relative compaction as indicated in the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16, or 17. The District reserves the right to perform compaction tests, or have compaction tests performed through a licensed geotechnical testing firm, to verify compaction of the backfilled trench section. All tests by the District will be performed in such a manner as will not unnecessarily delay the work. The owner shall not be required to reimburse the District for the initial tests performed. If subsequent tests are required due to compaction failures, the owner shall pay for all subsequent compaction tests.

In the event that significant groundwater is encountered in the excavated trench, Class 4 Backfill may be used in the pipe zone if the substitution is approved by the District Inspector **prior** to placement of Class 4 material. If Class 4 Backfill material used in the pipe zone, filter fabric must be placed on the sides and top of the Class 4 Backfill before proceeding with additional approved backfill.

Water stop impervious plugs (trench cutoff blocks) shall be installed in trenches where Class 4 Backfill is used, in all areas of ground water movement, and in all trenches containing pipeline slopes of 10 percent or greater.

The location and spacing of trench cut-off blocks for private building laterals shall be the responsibility of and shall be determined by the District. The location and spacing of trench cut-off blocks for sanitary sewer mains shall be determined by the General Manager. Trench cut-off blocks shall be constructed as shown in the Standard Drawings, Trench Cut-Off Blocks, Figure 18.

The use of backfill material other than Class 1, Class 2, Class 3 and Class 4 is not permitted unless approval is granted, in writing, from the General Manager.

7.10 Installation of Cleanouts

A two-way cleanout shall be installed in each building lateral at the property line of the premises being provided with sewer service and a one-way cleanout within 5 feet of where the lateral exits the structure foundation. Two-way cleanouts shall be connected by a straight section of pipe with no additional fittings installed. Cleanouts located under the house are not accepted, the cleanout must be located *outside* the building foundation.

Additional cleanouts shall be installed at intervals not to exceed 100 feet, and at any other point the owner may select for the purpose of keeping said sewer pipeline clean and free of obstruction. A cleanout shall also be installed on the upstream side of the fitting at all 45 degree or greater bends.

When the distance from where the sewer service exits the structural foundation of the building to the property line is less than 20 ft., the cleanout at the building can be substituted by installing a two-way cleanout at the property line. The lateral from the foundation to the property line cleanout must be a single piece of pipe, free of joints or fittings.

All cleanout risers must be installed 3 to 8 inches below finished grade and boxed to finished grade with an appropriate removable watertight plug in the end of the riser. No push on gasket PVC caps shall be permitted. Cleanout risers shall be of the same diameter as the building lateral (for 4-inch and 6-inch diameter building laterals) and at least 6-inches in diameter for all building laterals greater than 6-inches diameter. Appropriate cleanout boxes are required to be installed on **all** cleanout risers.

All cleanout boxes shall be constructed of concrete with cast iron lids. Reinforced plastic cleanout boxes are not acceptable. Cleanout boxes shall be set to grade and backfilled to prevent accidental displacement or removal. Lids shall have "SEWER" or equivalent imprinted on the lid. Lids with verbiage other than a sewer utility designation (i.e., Water, Gas, etc.) imprinted on the lid are not permitted. See Standard Drawings, Lateral Cleanout Assembly, Figure 10.

If new construction makes existing reinforced plastic cleanout boxes susceptible to vehicular/snow removal traffic, the affected cleanout boxes shall be replaced with a vehicle rated cleanout box.

A sewer lateral stub out to vacant land shall be brought to grade and boxed, contain a wye (two wyes for double service) with approved removable plugs in the end of the pipe. The stub out shall be placed at the property line at the appropriate depth to service the parcel.

Dual swing ties are required for all stub outs and cleanout risers. Permanent objects such as, fire hydrants, above ground utility boxes, power poles, water boxes, structures, etc. shall be used for swing ties. Cleanouts under decks shall have a minimum of 48" of clearance from the top of cleanout box to the bottom of deck joists. If less than 48" is available, access through a trap door through the deck must be provided (minimum dimensions of trap door is 2 feet by 3 feet).

7.11 Backflow Prevention Devices

Private and commercial building laterals are subject to the provisions of the California Plumbing Code, Section 710.0 and 710.1. Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover of the sewer serving such drainage piping shall be protected from backflow of wastewater by installing an approved type of backwater valve. Fixtures above such elevation shall not discharge through the backwater valve. Replacements of building laterals must be evaluated.

Building laterals which connect to a joint lateral (a privately owned *shared* lateral pipeline that receives wastewater flow from two or more parcels) may also require the installation of a backflow prevention device to protect private property.

In the event of a pipeline stoppage in the joint lateral, a backflow prevention device installed on each private building lateral would inhibit wastewater in the joint lateral from backing-up through the private building lateral into the building served.

7.12 Tracer Wire on Building Sewer Laterals

Building laterals are required to have a tracer wire installed adjacent to the sewer pipe. The tracer wire shall consist of 10 AWG minimum with THW, THHW, TW, THWN, or other approved wet location insulation.

The tracer wire shall be attached to the top of the building lateral with tape at appropriate intervals. Wire shall be continuous between cleanouts and other access points where excess wire shall be spooled within the cleanout boxes to provide connection points. Splices shall incorporate approved underground splice kits.

The tracer wire shall run the entire length of the building lateral. Beginning at the cleanout adjacent to the building foundation, continuing along the pipeline route, and terminating in the cleanout box at the property line. The tracer wire shall surface in the cleanout box at all intermediate cleanouts, and then continue along the pipeline route to the property line cleanout. The tracer wire shall be tested for continuity following backfill.

7.13 Sewer Lateral Pressure Testing

All new residential, private and commercial building laterals shall be pressure tested by either an air or water method, at the discretion of the District, in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities. The test sections shall be from the cleanout adjacent to the building to the service lateral connection point (typically the property line), or from the cleanout at the property line to the building cleanout, corresponding to the new pipeline installed. The District may also require the section from the building cleanout to the tie in under the structure be tested to assure proper connection of the building lateral to the structure waste piping. Residential, private, and commercial wastewater collection systems of such diameter and length to require the use of manholes shall also be balled and flushed, mandrel tested, and televised per Appendix A-7.

A District inspection shall be required for approval of workmanship and materials in compliance with District requirements. Testing will be completed in the presence of a District Inspector.

The system must be completely ready for inspection at the appointed time; failure to comply with this will result in an additional inspection service charge for each occurrence. The owner must be present at the time of inspection and test.

Building laterals installed as part of new construction require a pressure test after the structure has passed the Final Grading Inspection by the Town of Truckee or appropriate County equivalent.

If a pipeline fails the test, the owner shall be responsible for notifying the District when corrective work has been completed for scheduling a new test.

7.14 Building Sewer Lateral Televising

Building laterals installed as part of new construction shall require a closed circuit television (CCTV) inspection after the structure has passed the Final Grading Inspection by the Town of Truckee or appropriate County equivalent before the seal cap will be removed. The owner shall

be responsible for supplying the CCTV and all associated costs. A District Inspector must be on-site and view the CCTV inspection as it is being performed. The District will not accept videos as a substitute for live viewing. The purpose of the CCTV inspection is to insure no debris or sags greater than 1/2" are in the building lateral prior to connection to the building plumbing. A District Inspector must view and approve of the CCTV inspection before the seal cap will be removed.

7.15 Testing of Manholes, Grease Interceptors, Sand/Oil Interceptors

Testing of all manholes, grease interceptors, and sand/oil interceptors shall be in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities.

7.16 Residential/Small Commercial Pump Systems

For all building sites in which the improvement plans designate a pumped service or for any owner wishing to construct a structure on a portion of a lot or parcel for which gravity service was not provided, the owner shall install a sewage pump as specified herein for the purpose of lifting sewage to the public sewer. Where installed, such installations shall be maintained by the owner at the owner's expense.

A pumped sewer service shall consist of a gravity sewer, a wastewater holding tank, one or more pumps, a force main, electrical controls, and an alarm system. The pump and holding tank shall be installed in a location that provides at least a 48 inch diameter x 36 inch high area above the center of the holding tank that is free and clear of any obstructions to allow access for inspection and maintenance. If height clearance is not met, a removable access panel located above the center and at least 24 inch wide x 36 inch long, must be installed. If the holding tank is located outside of the building foundation it shall not be located within 5 feet of any building used as a dwelling, within 10 feet of any property line or within 50 feet of any lake, stream, or reservoir.

A duplex pump system is suggested for all applications. Commercial enterprises which contain public restroom facilities shall be required to operate and maintain a duplex system.

Installation:

Gravity Pipeline – The gravity sewer lateral from the building sewer to the wastewater holding tank shall be tested in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities. Pipe must be mechanically sealed to a watertight connection at the point of holding tank penetration. Gravity pipe shall be restrained as required to prevent separation from the tank. The gravity sewer lateral is subject to the requirements of Tracer Wire on Building Sewer Laterals, Section 7.12.

Wastewater Holding Tank – The holding tank shall be a solid impervious walled container rated for both the liquid it contains and the method of installation including direct burial. All holding tanks that are buried must have an anti-floatation device to prevent the tank from rising due to ground water. All direct burial polyethylene tanks must be approved in writing by the General Manager. All openings in the walls of the tank, including pipe or conduit penetrations, are to be mechanically sealed to prevent inflow of surface water, infiltration of ground water, or exfiltration of contained wastewater. The tank shall have a minimum capacity of 200 gallons. The tank shall be vented with a 1 1/2 inch minimum vent line. Tanks shall extend a minimum of

2" above finished grade, and have a sealed lid that is rated for the snow load or traffic load as applicable. It shall be the owner's responsibility to determine groundwater conditions that may cause the tank to float when empty and to provide the appropriate solutions to prevent it. Internal ballast that reduces the tank capacity below 200 gallons will not be acceptable. Tanks shall be installed to provide a minimum depth of 36" below the invert of the building gravity sewer inlet.

Pumping Equipment – Pumps shall be centrifugal of the non-clog or grinder type or progressive cavity grinder pumps. Non-clog pumps shall be capable of passing a minimum of a 2-inch diameter sphere. Pumps and motors shall be sized so as to maintain a minimum of 4-feet per second flow velocity throughout the entire discharge piping system when a maximum of one pump is pumping under actual installed conditions. Progressive cavity grinder pumps shall be sized so as to maintain a minimum of 1 foot per second flow velocity, throughout the entire discharge piping when a maximum of one pump is pumping under actual installed conditions. A copy of the pump specifications and pump curve shall be required and made available to the District Inspector before testing is allowed. Installation of pumping equipment shall be in accordance with pump manufacturer's recommendations including a vent hole in the standpipe, above the high water float, to purge the unit of trapped air. Pumps shall be mounted on a Rail System to allow the removal and installation of the pumps from ground level during a flooded wastewater holding tank condition.

Electrical – The electrical control cabinet shall be isolated from the holding tank. All wiring, controls, conduits, boxes, etc. shall meet or exceed National Electrical Code (NEC) requirements for materials, ratings, placement, and installation, etc. All equipment located in the holding tank shall be U.L. approved for its specific and proper use. All wiring in the area above the holding tank shall be provided with protection from physical damage by a combination of cable routing and/or conduits. Any wiring which hinders entry or view into the holding tank when opened will not be acceptable. All electrical connections shall be in an approved electrical junction box. All conduits leaving the holding tank shall be sealed. A circuit disconnecting means for all circuits must be located within sight of the holding tank unless a lockout device is installed on each individual circuit attached to a related pump system at the holding tank.

Alarm System – The holding tank and electrical controls shall include an alarming system that produces an audible and visual alarm when the liquid level in the holding tank exceeds a predetermined safe level. The audible and visual devices indicating such an alarm state shall be located at all inhabited buildings or structures served by the sewage system with the intent to notify occupants inside the house of the possibility of a wastewater spillage. The alarm system's power shall be supplied through a separate, dedicated circuit from the pump power supply. It is recommended that the alarm system include a battery backup to allow the alarm to function during an electrical power outage. For commercial applications that serve multiple buildings, the alarm system must also include an auto dialer system that will phone a responsible party and notify them of the alarm status of the pump system. Where home security systems exist, tying in the sewer pump alarm is recommended.

Discharge Piping – The discharge pipeline shall be ductile iron, polyvinyl chlorine (PVC), high density polyethylene (HDPE), or an approved pressure rated material designed for wastewater. The piping shall be pressure class 150 minimum and rated for the pressure service being installed. The pipeline size shall be **2 inch nominal diameter minimum for non-clog pumps, and 1 ¼ inch nominal diameter minimum for grinder pumps.** The discharge pipeline shall be fitted with an approved pressure rated sewer check valve and an isolation gate or ball valve.

The discharge pipeline shall also include a 1/4 inch valve pressure test port located between the check portion of the check valve and the isolation valve. The isolation valve shall be located on the discharge side of the check valve. Both valves and the test port shall be located in an accessible area either inside or outside of the holding tank in such a manner that they are accessible for operation and maintenance or repairs.

All discharge pipelines are required to have a tracer wire installed adjacent to the sewer pressure pipe. Tracer wire shall consist of 10 AWG minimum with THW, THHW, TW, THWN, or other approved wet location insulation. Wire shall be attached to the top of the force main with tape at appropriate intervals. Wire shall be continuous along entire length of force main, beginning at the wastewater holding tank and terminating at the property line cleanout. Splices shall incorporate approved underground splice kits. Each run of tracer wire shall be tested for continuity following backfill.

In cases where the District service lateral stubbed to the property line is a force main (positive slope), the tracer wire following the private force main discharge piping shall be brought to the surface and boxed to grade at the property line. It is recommended that the tracer wire be placed in conduit where it surfaces through the ground at the property line and covered with a concrete box with a cast iron lid labeled "sewer" or "S".

Discharge pipelines shall have a trench cutoff block located every 50 linear feet of pipe, at changes in pipeline type and/or grade, and at the pump tank, and as designated by the General Manager. Thrust blocks shall be located at all fittings that change the direction of the pipe. Thrust blocks shall be constructed of concrete with a minimum size of 2 cubic feet.

A siphon break shall be installed on the discharge pipeline at its connection point to the gravity sewer. A cleanout in accordance with the Installation of Cleanouts, Section 7.10, shall be placed immediately downstream of the siphon break in the discharge pipeline at the property line, if the siphon break can be placed in a practical manner such that sufficient gravity slope can be maintained from the property line to the District main pipeline.

All discharge piping is required to be protected from freezing, and is required to have a minimum of 30" of cover. It is the owner's responsibility to address site specific conditions and install freeze protection as necessary. Protection may include provisions of bypass drains, insulation, and heat tape.

Discharge piping shall be installed with a continuous positive slope, unless approved by the General Manager.

Inspection and Testing:

The gravity portion of the pipeline from the building to the holding tank shall be tested in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities. For testing purposes, a Fiberglass Holding Tank shall be pressure tested with water for 10 minutes with no loss. A Concrete Wastewater Tank shall be pressure tested with water for 30 minutes with no loss, or a 4 hour test with a maximum loss of ¼”.

A visual inspection shall be performed to check the following:

- Proper venting of the holding tank.

- Watertight mechanical seals on the holding tank lid and at all pipe or conduit penetrations.

The discharge pipeline shall be pressure tested with air or water to a pressure of 150 percent of the calculated maximum possible working pressure (the Total Dynamic Head, TDH) for the installed pump. The maximum possible working pressure for the system can be assumed to occur at the pump's shut off point. The pump shut off point can be obtained from the pump's performance curve by following the curve to the point at which it meets the axis representing the head of liquid. The pressure must remain constant for 10 minutes. The required test equipment shall be provided by the owner and be acceptable to the District.

The electrical system and controls shall be inspected and approved by the local governing authority for the building electrical inspection. Pumping and alarm tests shall only be performed after the electrical system has been inspected and approved by the proper authority. The District Inspector shall require proof of such approval before starting any of the following functional tests:

- The pump shall be started and stopped so the check valve can be tested for proper operation.

- The pumping system shall be tested for a discharge pipeline velocity of 4 feet per second. The flow velocity test shall be performed with the discharge pipeline full of water and the pumping system functional under normal operating conditions.

- The pump shall be run to pump down the holding tank to allow a visual inspection of the tank and to check it for leaks.

- The alarm system shall be checked for proper function of audio and visual alarms in all buildings served by the pump system.

Septic tanks may be converted to house the Wastewater Holding Tank, but are prohibited from being used as the Wastewater Holding Tank. Converted Septic Tanks must have drain holes drilled in the bottom of the tank to drain trapped water, and appropriate solutions to prevent the Wastewater Holding Tank from floating.

Deviation from Requirement:

Any deviation from the above stated requirements shall be approved in writing by the General Manager.

7.17 Delay in Sanitary Sewer Facility Testing

Testing of new sanitary sewer facilities may be delayed when inclement weather does not allow the required testing to be performed during the winter months. When such a situation arises, the owner may enter into a written agreement with the District to delay the required testing. The purpose of the agreement is to allow the owner to receive a Town of Truckee or Placer County Certificate of Temporary Occupancy. Said agreement allows the owner to use their deposit as security to assure the required testing of the sanitary sewer facilities when weather permits, with a specific deadline date upon which testing must be completed.

7.18 Owner-builder Temporary Hook up to Sanitary Sewer

An owner-builder, who plans to place a trailer on a parcel for the owner-builders sole use and living quarters while building a residence, may request a temporary trailer be connected to the sanitary sewer system by completing the following administrative steps:

- Present the appropriate valid Town of Truckee/Placer County Building Permit at the District's office and request an Application for Sewer Permit.
- Pay connection fees to the District and to the Tahoe-Truckee Sanitation Agency (T-TSA).
- Pay Residential Permit deposit for the house. This deposit is refundable upon the District's removal of the seal cap, less any fees accrued from date of Application for Sewer Permit issuance. See Section 7.03, District Seal Cap.
- Pay Owner-builder Temporary Trailer Hook-up fee.
- User fees shall commence on the date payment is made for the temporary trailer. Unpaid user fees will be deducted from deposits when final inspection has been completed.

Once the above administrative requirements are completed, the temporary trailer may be connected to the District sanitary sewer system under the following conditions:

Installation of Pipelines: The house building lateral and the temporary sewer lateral have been installed, backfilled and tested by the owner-builder and inspected by a District Inspector. The house building lateral shall have a District seal cap and a numbered seal placed on it. The type of pipe used for the temporary sewer lateral shall be in accordance with District Code requirements.

The temporary sewer lateral shall be located in a trench with at least 30 inches of cover. The temporary sewer lateral shall have a slope of at least 1/4 inch fall per foot of length. The temporary sewer lateral shall be connected to the house building lateral using a wye.

The temporary sewer lateral riser shall be provided with a sewage drain inlet not less than 3 inches in diameter (if a trap is required as described) or 4 inches in diameter if no trap is required to receive the wastes of the temporary trailer. The riser shall be protected by either of the following:

- A concrete box constructed of concrete with a cast iron lid rated for vehicle loading as described in Section 7.10, Installation of Cleanouts, or
- A 4-inch thick slab of concrete extending at least 6 inches away from the outside diameter of the riser pipe. The riser shall extend 3 inches above the top of the concrete slab.

Connection of the temporary trailer to the temporary sewer lateral shall be a watertight connection to prevent the entrance of groundwater or surface water at all times. Trailer facilities shall not be used to wash or dispose of construction tools or materials.

Location: The temporary trailer shall be parked a distance of no more than 3 feet from the temporary connection point riser. The riser shall be placed in concrete as described below. If a cleanout riser on the house sewer lateral can be utilized, a concrete box can be used in place of the concrete. The connection of the trailer to the riser shall be watertight.

Venting: In the case that the trailer waste fixtures are not properly vented, the drain inlet shall be provided with an effectively vented trap not less than 3 inches in diameter for inlets designed to receive the discharge of vehicles equipped with toilets.

If the temporary trailer fixtures are not properly vented, the drain inlet trap shall be individually vented with a vent pipe not less than 2 inches interior diameter. All vent pipes, in outdoor locations, shall be located at least 10 feet from an adjoining property line and shall extend at least 10 feet above the ground level. All vent pipes shall be adequately supported.

Connection of Temporary Trailer: The house sewer lateral and the temporary sewer lateral shall be tested as required by the District Code. After the test, a seal cap and numbered seal shall be placed on the house connection point and the temporary trailer shall be connected to the temporary sewer lateral as described above.

The temporary sewer lateral may be used during the house construction or for a maximum of 2 years, whichever is less, beginning with the date the trailer fee is paid. If the house construction is not complete after the 2 year period, the owner may solicit the District to extend the allowed use of the temporary sewer lateral for an additional year. An extension will require an additional permit extension fee. After the end of the second year of use, the temporary sewer lateral shall be removed and the wye plugged as described above.

Upon completion of the house and subsequent granting of occupancy by the Town of Truckee/Placer County, the temporary sewer lateral shall be completely removed by the owner-builder within 5 days of occupancy of the house. The temporary sewer lateral shall be removed from its trench.

The wye (fitting that joined the building lateral with the temporary lateral) shall be rotated upward and a cleanout riser pipe installed to grade. The cleanout shall be boxed to grade as shown in Lateral Cleanout Assembly, Figure 10. All temporary sewer lateral materials shall be removed from the property and the temporary sewer lateral trench shall be completely backfilled. The seal cap shall be removed and the house sewer lateral retested as required by the District Code.

7.19 Abandoned Sewers and Sewage Disposal Facilities

Every abandoned building (house) sewer, or part thereof, shall be plugged or capped with an approved watertight plug within 5 feet of the property line. The procedure shall be witnessed by a District Inspector.

Once the lateral is plugged at the property line, one of two options are available. The owner may continue to pay user fees or may choose to stop user fee payments. If user fees are discontinued, connection fees will be required at the time of re-connection at the current connection fee rate. If the owner continues to pay user fees, no connection fees will be required at the time of reconnection.

Every cesspool, septic tank and seepage pit which has been abandoned or has been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed from there and be completely filled with earth, sand, gravel, concrete or other approved material.

The top cover or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until the cesspool, septic tank or seepage pit has been inspected. After such inspection, the cesspool, septic tank or seepage pit shall be filled to ground level.

Where disposal facilities are abandoned consequent to connecting any premises with the public sewer, the permittee making the connection shall fill all abandoned facilities as required within 30 days from the time of connecting to the public sewer (Uniform Plumbing Code, Section 722.5). The District shall verify such abandonment.

8. PRETREATMENT PROGRAM

8.01 Purpose

The purpose of this section is to describe the District's Pretreatment Program, including fats, oils, and grease reduction at commercial facilities and lint and silt reduction at commercial laundries, laundromats and dry cleaners.

8.02 Commercial Food Establishments

Any commercial establishment serving food such as, but not limited to:

restaurants	coffee shops
delicatessens	drive-in eating establishments
bakeries	donut shops
take-out	ice cream or mild drive-in stations
food catering establishments	

or commercial food manufacturing facilities such as, but not limited to:

packing establishments	slaughter houses
canneries	

or commercial facilities such as, but not limited to:

hospitals	motels/hotels
markets	recreation or reception halls
public schools	conference centers
churches	

When any grease or other objectionable materials may be discharged into a public or private sanitary sewer system the commercial establishment shall have installed on the premises an appropriately sized grease interceptor or grease trap as required by Chapter 10 or the Uniform Plumbing Code.

The facilities listed above can be classified into the following categories based on the type of facility, the nature and the volume of the waste flow produced, the hours of operation, and the number of meals served per day:

- **Industrial** – commercial facilities as defined in the Uniform Plumbing Code, and those facilities designated by the General Manager.

- **High Volume** – full menu type establishments operating more than 16 hours per day and/or serving 500 or more meals per day.

- **Medium Volume** – Full menu or specialty menu type establishments serving full meals 8 to 16 hours per day, and/or 100 to 400 meals per day.

- **Small Volume** – fast food, take-out or specialty type food establishments with limited menus, a minimum of dish washing, and/or minimal seating capacity.

Grease interceptors shall be installed at all industrial, high, and medium volume food establishments. The size, type and location of each grease trap or interceptor shall be approved by the General Manager or his/her designated representative. Waste in excess of 140 degrees Fahrenheit (60 degrees Celsius) shall not be discharged into a grease trap or interceptor.

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 trap or interceptor.

Waste discharge from fixtures and equipment in the above-mentioned types of establishments which may contain grease, or other objectionable materials, including, but not limited to, scullery sinks, pot and pan sinks, dishwashers, soup kettles, etc., and floor drains located in areas where such objectionable materials may exist, may be drained into the sanitary waste through a grease trap or interceptor when approved by the General Manager. **Exception: Toilets, urinals, and other fixtures containing fecal material may not flow through interceptors, traps or sand/oil interceptors. Garbage disposal units shall not be plumbed to grease traps.**

District personnel will periodically schedule inspections of grease traps and interceptors. It shall be the responsibility of the owner to maintain grease traps and interceptors in an efficient operating condition by periodic removal and proper disposal of the accumulated grease. No such collected grease shall be introduced into any drainage piping or public or private sanitary sewer facility.

The owner shall post and maintain a current grease trap/interceptor cleaning and maintenance log on the premises and shall have the log available for review by District personnel at all times and when requested by the District to furnish evidence of maintenance.

All grease interceptors or traps shall be maintained in efficient operating condition by periodic removal of the accumulated grease and latent material. No such collected grease shall be introduced into any drainage piping or public or private sewer. If the District determines that a grease interceptor is not being properly cleaned or maintained, the District shall have the authority to mandate the installation of additional equipment or devices and to mandate a maintenance program.

8.03 Grease Interceptors

Industrial facilities, Medium, High Volume food establishments as defined in Commercial Food Establishments, Section 8.02, are required to install a grease interceptor. Small Volume food establishments may require a grease interceptor as determined by the General Manager.

Interceptors shall be constructed and installed at the expense of the owner, in accordance with the Standard Drawings, Grease Interceptor, Figure 25.

Each grease interceptor shall be so installed and connected that it shall be easily accessible at all times for inspection, cleaning, and removal of the intercepted grease. A grease interceptor may not be installed in any part of a building where food is handled. Proper location of the grease interceptor shall meet the Uniform Plumbing Code Requirements and the approval of the General Manager.

Each commercial facility or business establishment for which a grease interceptor is required shall have an interceptor which shall serve only that business establishment. Buildings remodeled for use requiring interceptors shall be subject to these regulations.

Grease interceptors shall have a minimum 750-gallon capacity.

Interceptors shall be installed in such a manner that surface drainage may not enter. Interceptors located in vehicle traffic areas shall be capable of withstanding an H-20 axle load. The access port cover shall be at least ½ inch below finished grade and shall also be capable of withstanding an H-20 axle load. Except as otherwise provided, the cover and access ports shall be gas-tight. The waste shall enter the interceptor through an inlet pipe only. Interceptors shall be so designed that they will not become air bound. Each interceptor shall be properly vented, as required by Chapter 9, Uniform Plumbing Code.

Grade rings may be used to establish final grade for the access ports and shall be installed using Ram-Nek and Ram-Nek primer. Chimney seals shall be installed within the grade rings in all interceptors.

Interceptors shall be tested in the same manner as manholes. The test shall be witnessed by a District Inspector.

Abandoned grease interceptors shall be emptied and filled in the same manner as required for abandoned septic tanks as described in Section 1119, Uniform Plumbing Code.

8.04 Grease Traps

Small volume food establishments as described in Commercial Food Establishments, Section 8.02, if not required to install a grease interceptor, shall install a grease trap. Installation of grease traps must be in conformance with and have the approval of the appropriate County Environmental Health Department.

No grease trap shall be installed which has an approved rate of flow of more than 55 gallons per minute, nor less than 20 gallons per minute, except with prior written approval of the General Manager.

Each plumbing fixture or piece of equipment connected to a grease trap shall be provided with an approved type flow control or a restricting device installed in a readily accessible and visible location in the tailpiece of the drain outlet of each such fixture. Flow control devices shall be so designed that the flow through such device or devices shall at no time be greater than the rated capacity of the grease trap. No flow control device having adjustable or removable parts shall be approved.

Each grease trap required by this section shall have an approved rate of flow, expressed in gallons per minutes, which is not less than 40 percent of the total capacity in gallons of fixtures discharging into said trap. The grease retention capacity of the trap, expressed in pounds of grease, shall not be less than two times the approval rate of flow in gallons per minute.

Any grease trap installed with the inlet more than 4 feet lower in elevation that the outlet of any fixture discharging into such grease trap shall have an approved rate of flow which is not less

than 50 percent greater than that given in the preceding paragraph. Not more than four separate fixtures shall be connected to or discharged into any one grease trap.

Each fixture discharging into a grease trap shall be individually trapped and vented in an approved manner. An approved type grease trap may be used as a fixture trap for a single fixture when the horizontal distance between the fixture outlet and the grease trap does not exceed 4 feet and the vertical tailpipe or drain does not exceed 2 ½ feet.

No water jacketed grease trap or grease interceptor shall be approved or installed.

Each grease trap shall have an approved water seal of not less than 2 inches in depth or the diameter of its outlet, whichever is greater.

8.05 Sand/Oil Interceptors

Every private or public wash rack used for cleaning vehicles, machinery or machine parts, or facilities used for vehicle maintenance shall drain or discharge into a sand/oil interceptor of an approved design for this use.

The minimum internal dimensions of the interceptor shall be approximately 24 inches wide by 72 inches long with 57 inches between the tank bottom and the bottom opening of the 90-degree bend at the outlet for a 490-gallon minimum liquid capacity (see Standard Drawings, Sand/Oil Interceptor, Figure 26).

The inlet and outlet sewer piping shall conform to District specifications. The sewer outlet pipe shall have a downward pointing 90-degree bend inside the tank. The bottom entrance to the 90-degree bend shall extend 6 inches below the invert of the outlet pipe. The top of the sewer inlet and outlet pipes shall be at least 30 inches below the pavement surface where they enter and exit the tank.

The tank shall have a minimum of one self-sealing access port and shall be maintained in a leak tight condition so there is no entry of surface storm water. There shall also be no leakage of groundwater into the tank, and waste flow shall not be allowed to flow into the surrounding ground. Grade rings may be used to establish final grade for the access ports and shall be installed using Ram-Nek and Ram-Nek primer. To reduce infiltration, sand/oil interceptors within paved areas shall be installed with chimney seals between the interceptor cover and the manhole frame.

When the tank is located in a vehicle traffic area, the access port(s) shall be set at least ½ inch below finished grade. Tank covers and access ports located in vehicle traffic areas shall be capable of withstanding an H-20 axle load.

District personnel will periodically schedule inspections of sand/oil interceptors. It shall be the responsibility of the owner to maintain the sand/oil interceptor in an efficient operating condition by periodic removal and proper disposal of the accumulated sand and oil.

No such collected sand and oil shall be introduced into any drainage piping or public or private sanitary sewer facility.

The owner shall post and maintain a sand/oil interceptor cleaning and maintenance log on the premises and shall have the log available for review by District personnel at all times.

All trapped materials removed from the interceptor, including filters and filter media, shall be disposed of in accordance with current existing environmental codes and regulations. It is the responsibility of the owner to determine the governing agency and comply with the code requirements.

Sand/Oil Interceptors shall be tested in the same manner as manholes. The test shall be witnessed by a District Inspector.

Abandoned sand/oil interceptors shall be emptied and filled in the same manner as required for abandoned septic tanks as described in Section 1119, Uniform Plumbing Code.

Vehicle Wash Installations: All vehicle wash installations shall be equipped with an appropriate sand/oil interceptor. Portable water piping to the wash installation shall be metered to verify water consumption. No other facility other than the wash installation shall be fed potable water through the meter.

Vehicle wash installations shall utilize a recycle system. The clarification, filtration and recycle system shall be designed by the owner and approved by the District. When a recycle system is used, there shall be a closed shutoff valve in the sewer outlet pipeline external to the interceptor tank. It shall have the necessary access and protection.

It shall be the responsibility of the owner to maintain the system for proper operation. The District shall be notified at least 72 hours in advance of any emptying and/or flushing of the system into the sanitary sewer.

The design of automated full service vehicle wash installations must be approved by the District on an individual basis.

Vehicle Maintenance Facilities: Each vehicle maintenance facility shall have a sand/oil interceptor that meets the minimum tank requirements described above.

8.06 Solid Waste Enclosures

For a solid waste enclosure to be tied to the sanitary sewer system, the following items must occur:

- Storm water is prohibited from entering the sanitary sewer system; therefore, all solid waste enclosures that are connected to the sanitary sewer shall have a roof to prevent storm water from entering the system.

- Grading around the solid waste enclosure shall be designed to drain storm water away from the enclosure.

- Enclosure shall include a traffic rated, trench drain and/or grate connected to the sanitary sewer and shall flow through a Sand/Oil Interceptor or other approved device to keep grease and/or sand from entering the sanitary sewer system, in addition to keeping sewer gases from entering the solid waste enclosure.

- Enclosures with sewer connections shall have a water connection in or nearby to provide for cleaning inside the enclosure area. The hose bib shall be located to prevent damage from bins.

- The property owner is responsible for the regular maintenance of enclosures and containers and keeping the enclosure fully functional and clean.

8.07 Lint Interceptor

Commercial laundries, laundromats, and dry cleaners shall be equipped with an interceptor in order to reduce the quantity of lint and silt that enter the collection system. Design, size, and location of the interceptor must be submitted by a licensed plumbing contractor or professional engineer for District review and approval. Interceptor shall be maintained in accordance with manufacturer's recommendations to prevent the escape of appreciable quantities of lint/silt.

8.08 Time of Compliance

All commercial establishments serving food, commercial food manufacturing facilities, and commercial facilities described in Commercial Food Establishments, Section 8.02, and all private or public wash facilities used for cleaning vehicles, machinery or machine parts, or facilities used for vehicle maintenance as described in Sand/Oil Interceptors, Section 8.05, shall be required to install a grease interceptor/trap, or a sand/oil interceptor within the 60 day period after the first occurrence of any of the following events:

- Transfer of ownership or interest in the parcel, the facility, or the business;

- The issuance by the County/Town of any building permit for the construction, reconstruction or related work to be performed on the premises costing more than $5,000;

- The backup or discharge of wastewater on or from the premises due to grease, oil, or sand build up in their building plumbing or building lateral;

- Or 90 days after receiving written notice from the General Manager of the necessity for installation of such facilities.

9. INSPECTION

9.01 Pre-Inspection Requirements

All work completed under the provisions of the District Code shall be subject to inspection by and shall meet the approval of the General Manager; however, approval by the General Manager shall not relieve the owner or any other person from complying with any other applicable law or ordinance.

Residential: All applicable fees and deposits must be paid and an Application for Sewer Permit must be issued before scheduling and receiving an inspection by District personnel. District personnel shall inspect the installation of all sanitary sewer facilities for compliance with all requirements of the District Code.

Commercial: All applicable fees and deposits must be paid, the District Plan Check Review completed, and if applicable, an Application for Sewer Permit issued before scheduling and receiving inspections by District personnel. An Application for Sewer Permit is not required for developments involving land subdivisions subject to the Subdivision Act. District personnel shall inspect the installation of all sanitary sewer facilities for compliance with all requirements of the District Code.

9.02 Request for Inspection of Sanitary Sewer Facilities

The owner shall notify the District at least two business days prior to the time any inspection is to be made, unless a full time inspector representing the District is assigned to the project.

9.03 Conditions Required at Time of Inspection

At the time of the inspection, the owner shall have all work uncovered and convenient to facilitate the inspection. The owner shall provide and make available, to the inspector, any necessary special equipment and/or facilities to accomplish a thorough and complete inspection of the work. No inspections of sanitary sewer facilities will be made if the inspector's view of the facilities is blocked or obscured. The owner shall, at their sole cost, remove all materials, equipment, backfill and other objects, at the direction of the inspector, so as to facilitate the inspection.

9.04 Correction of Defective Work

If the construction/installation of sanitary sewer facilities does not conform to the provisions of the District Code, the District shall issue a Notice of Sewer Inspection, in writing, to notify the owner concerning the defective construction/installation. The owner shall correct the defective construction/installation before subsequent inspection by the District. If the owner fails to comply and correct the items listed on the Notice of Sewer Inspection, the Application for Sewer Permit may be suspended and/or revoked in accordance with the provisions of the District Code.

9.05 Facilities Not to Be Used Prior to Final Inspection

No sanitary sewer facility constructed under the provisions of the District Code shall be placed in use until the work has been approved by the District and a Certificate of Final Inspection has been issued. Deviations from this requirement may be made only when the work is substantially complete and has been inspected and found to be in conformance with the provisions of the District Code. The General Manager shall make a determination in writing that the best interest of the public will be served by permitting such use, prior to the completion of the work under consideration.

9.06 Other Inspections

District personnel may from time to time require periodic inspection of residential and commercial facilities to verify current use of the sanitary sewer. These inspections may involve, but are not limited to:

- Commercial Fixture Counts
- Sand-Oil Separator Inspections
- Grease Trap/Interceptor Inspections
- Suspected Additional Living Units on the Premises Verification

10. MAINTENANCE OF EXISTING FACILITIES

10.01 Maintenance and Testing of Private Sanitary Sewer Facilities

The owner of a property served by the District's sanitary sewer shall be responsible for the operation and maintenance of the private sanitary sewer facilities, including all devices or safeguards required by this section, which are located upon said property. The owner operation and maintenance responsibility is from the building to the connection at the sanitary sewer easement or property line.

The owner shall, at their own risk and expense, install, keep and maintain in good repair all *sanitary sewer facilities* (sanitary sewer pipelines, force mains, manholes, equipment, pump stations, and related appurtenances) situated on the premises so served. The District shall not be responsible for any loss or damage caused by improper or defective installation of sanitary sewer facilities, whether inspected and/or approved by the District. All such installations of sanitary sewer facilities shall conform to all federal, state, county, town and local laws, rules, regulations and ordinances.

The owner served by the District's sanitary sewer system shall be responsible and liable for all costs involved in the repair of all damages caused by the owner, customer, or agents thereof, to the District's sanitary sewer facilities, including but not limited to sewer obstructions, wherever located.

All sanitary sewer facilities found in need of repair as a result of testing procedures required by this chapter shall be repaired and/or installed to the standards set forth in the District Code.

10.02 Conditions Requiring Testing of Existing Sanitary Sewer Facilities

It shall be unlawful for any owner of a house, building, or property connected to the District's sanitary sewer system to maintain private sanitary sewer facilities in a condition such that the tests contained herein cannot be successfully accomplished.

All private sanitary sewer facilities, including those serving residential, multiple residential, commercial, and industrial connected to the District's sanitary sewer system shall be tested, unless waived under Section 10.05, when any of the following conditions occur:

(a) remodeling of the house, building or property served to an extent of more than 50 percent of the assessed valuation, as determined by Nevada/Placer County or

(b) installation of additional plumbing fixtures in the house, building or property served and/or installation of additional building lateral pipeline, or

(c) change of use of the house, building or property serviced from residential to business or commercial, or from non-restaurant commercial to restaurant commercial, or

(d) repair or replacement of all or part of the building lateral(s), force main pipeline, or private lift stations components, or

(e) the addition of living quarters, such as guest cabins on the property served or conversion of garages into living quarters with plumbing fixtures, or addition of structures on the parcel that impact an existing building lateral or force main, or

(f) prior to the close of escrow upon a sale of the house, building or property served, or

(g) the transfer of ownership or interest in the parcel, the facility, or the business. (A transfer of ownership between immediate family members, shall not require testing), or

(h) change in tenant of the facility or business, or

(i) change of ownership (multiple owners) on the deed selling their portion to other partner/investors, or

(j) an inspection by the District indicates reasonable cause, or

(k) upon determination of the General Manager that testing or sanitary sewer facility replacement is required for the protection of the public health, safety and welfare.

10.03 Testing Procedures for Existing Sanitary Sewer Facilities

The owner of a house, building, or property connected to the District's sanitary sewer system shall, at the owner's sole risk and expense, conduct all sanitary sewer facility upgrades and testing required and shall notify the District 48 hours prior to testing. Testing must be witnessed by a District inspector or representative.

Sanitary Sewer Pipelines: All building laterals, and privately owned main pipelines shall be tested by either an air or water method, at the discretion of the District. Tests shall be in accordance with Appendix A-7, Section A-7.10.

In the case of building and joint laterals, the test section shall be from the building cleanout to the District service connection point. The test section includes all private pipelines, including joint laterals, which provide sanitary sewer service to the parcel in question.

Privately owned main pipelines shall be tested there full length. Test failures of non-metallic asphaltic composite pipe shall require entire replacement of the defective pipeline.

If a cleanout has not been installed at the easement/property line, a two-way cleanout shall be installed prior to testing. If there is no cleanout located outside the building foundation (within five feet of the foundation wall), then a cleanout shall be installed. If the building lateral exits the foundation under an existing deck or concrete patio, the location of the building cleanout near the foundation may be modified on a case-by-case basis as determined by the General Manager. The cleanouts shall be installed and boxed as specified in Installation of Cleanouts, Section 7.10. The owner shall be responsible for such installation. A cleanout underneath the house is not acceptable.

The building cleanout can be substituted by installing a two-way cleanout at the property line when the distance from the point where the building lateral exits the foundation to the property line cleanout is less than 20 feet and the building lateral consists of a single pipe segment with no fittings. Such building laterals will be considered too short to test. At the District's discretion,

building laterals that are too short to test may be required to be televised to confirm integrity of pipeline.

Manholes, Grease Interceptors, Sand/Oil Interceptors: Testing of all manholes, grease interceptors, and sand/oil interceptors shall be in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities.

Pump System Testing, Pump Station outside the Building Foundation: The gravity portion of the pipeline from the building to the holding tank and the wastewater-holding tank shall be tested in accordance with Appendix A-7, Section A-7.10, Testing of Sanitary Sewer Facilities. For testing purposes, the holding tank shall be considered a manhole.

A visual inspection of the pump system will be performed to check for:

- soundness of the wastewater holding tank.
- proper venting of the holding tank.
- acceptable weather proof insulated box with adequate waterproof insulation below the box lid directly above the holding tank.
- a weather tight seal on the holding tank lid and at all pipe and electrical conduit penetrations.
- a properly functioning check valve on the discharge pipeline.
- properly boxed property line clean out. If necessary, the property line clean out shall be brought to grade in accordance with Section 7.10, Installation of Cleanouts.

In the event that there is no check valve and/or pressure test port installed on the existing discharge pipeline, a check valve, a 1/4-inch valve pressure test port, and an isolation gate or PVC ball valve shall be installed in accordance with Section 7.16, Residential/Small Commercial Pump Systems.

A pressure gage shall be connected to the test port and the pressure test port valve shall be opened. The pump shall be started and the holding tank pumped down to allow a visual inspection of the holding tank to check it for leaks. The check valve shall also be inspected for proper operation.

Immediately after the holding tank is pumped down and the pump turned off, the gage pressure shall be noted in the discharge pipeline. The pressure shall remain constant for 10 minutes. Any drop in pressure shall constitute a test failure and the check valve and/or the discharge pipeline shall be repaired and/or replaced.

After the check valve and/or the discharge pipeline is repaired and/or replaced, another test shall be attempted. A subsequent loss of pressure constitutes a failure of the check valve and/or discharge pipeline; whereupon the defective check valve and/or discharge pipeline section shall be replaced and tested as described in Section 7.16, Residential/Small Commercial Pump Systems.

The alarm system, if so equipped, shall be checked for proper function of audio and visual alarms. If no alarm system exists, an alarm system shall be installed in accordance with Section 7.16, Residential/Small Commercial Pump Systems, if the pump system testing has been triggered by a building remodel that impacts the number or configuration of any plumbing fixture units in the building.

In the event that the holding tank or the force main needs replacement, the pump and controls must be updated to meet District Code. In the event that the controls need replacement, an alarm system must be installed as specified in Section 7.16, Residential/Small Commercial Pump System.

Septic tanks and concrete vaults converted for use as holding tanks shall be air, water or vacuum tested. The test shall be the same as specified for sanitary sewer pipelines, manholes, and grease and sand/oil interceptors. If the converted septic tank/concrete vault fails the test, it shall be abandoned and a new holding tank meeting the requirements for residential pump systems shall be installed in its place.

10.04 Time Limits for Completion of Testing Procedures

Testing shall be completed in a timely manner as follows:

- Prior to the close of escrow upon the sale of the residence, building, or property, or transfer of ownership or interest in the parcel, the facility, or the business, or
- Within 30 days of standard notification by the District, or
- Immediately, if it is determined by the General Manager that testing and repair are necessary to protect public health and the integrity of the sanitary sewer system.

In the event that testing would be required during the period from October 15 to April 15 or during other such periods when such work would be impractical due to weather conditions, the General Manager may defer such requirement upon posting of a cash deposit or performance bond with the District. The posting of the cash deposit or performance bond is intended to assure funds are available to repair and replace the sanitary sewer facilities in question when weather conditions permit. The amount of the cash deposit or performance bond shall be determined by the District based on the time since the last test, pipe material, lineal footage of the building lateral, the number of cleanouts and other related appurtenances to be installed, as well as the removal and replacement of existing physical obstacles and structures affected by the test.

In place of a cash deposit or performance bond, the owner may choose to hold an equal amount of funds in an escrow account, if the property or business is being sold or transferred. Funds held in escrow will not be released without written notification by the District to the Title Company holding such funds. In such case, the testing must be performed by the following June 15.

If a sanitary sewer facility fails any of the above described tests, the owner shall cause corrective work and retesting to be performed within 30 days from the date of the original test. All repairs shall be approved by the District.

Repairs or replacement of 50 percent or more of a sanitary sewer pipeline or force main may be cause for total pipeline replacement as determined by the District. In the case of total pipeline

replacement, the pipeline shall be installed in accordance with the requirements of new pipeline installation as outlined in Section 7, Installation of Sanitary Sewer Facilities.

After a second failure of any sanitary sewer facility, the owner shall be charged an additional inspection fee for further inspections.

In the event that a sanitary sewer facility has not been tested within the required time period, the District shall initiate procedures for sewer disconnection.

10.05 Waiver of Testing Requirements

The General Manager shall have the power to waive testing requirements if:

(a) the sanitary sewer facility has been installed and/or tested within a prior 8 year period and there is good reason to believe that such testing is not necessary, or

(b) the sanitary sewer pipeline or force main is of such a length that testing is not practical, or

(c) the sanitary sewer facilities are part of a central private sanitary sewer system as described in Section 10.06, Shared Use Facilities, and the District has an established written agreement concerning specific testing requirements.

Nothing herein shall constitute a warrant by the District of the soundness or ability of the sanitary sewer facility to accomplish its purpose or remain in compliance with the District Code.

10.06 Shared-Use Facility

The District may choose to allow the owner of a ***Shared-Use Facility*** (common interest subdivisions, commercial shopping centers, mini malls, apartment complexes, condominium complexes, public schools, office buildings, and hospitals, etc.) one of the following option agreements for the maintenance and testing of sanitary sewer facilities. The use of a Shared-Use Facility agreement for testing purposes is allowed by the District on a case-by-case basis. Qualification for use of such agreement is determined solely by the District and is based on the size, layout, and complexity of the sanitary sewer facilities serving the Shared-Use Facility. Any agreement must be in writing and acceptable to the District and the owner of the Shared-Use Facility.

Options No. 1: The owner of the Shared-Use Facility agrees to complete required testing, repair or replacement of ***all*** the sanitary sewer facilities servicing the Shared-Use Facility upon notification by the District that testing is required. Under this option, sales, leases, or changes in tenant/ownership of individual units or suites are allowed to proceed prior to testing and without approval from the District.

After 5 years from the latest test date, ***all*** the sanitary sewer facilities servicing the Shared-Use Facility shall be retested when any of the conditions outlined in Section 10.02, occur ***or*** Option No. 2 may be chosen and applied.

Option No. 2: For 25 units or more, the owner of the Shared-Use Facility agrees to complete required testing, repair or replacement of ***all*** the sanitary sewer facilities servicing the Shared-Use Facility upon notification by the District that testing is required, and will complete said testing over a 5 year period of time. The owner of the Shared-Use Facility shall be required to test a minimum of 20 percent of the total number of sanitary sewer facilities per year, beginning at the time of initial notification by the District that such testing is required. Under this option, sales, leases, or changes in tenant/ownership of individual units or suites are allowed to proceed without approval from the District *if the conditions of the agreement have been fully honored by the owner of the Shared-Use Facility.*

After 3 years from the latest test date associated with the 5 year testing period, 20 percent of the total number of sanitary sewer facilities servicing the Shared-Use Facility shall be retested when any of the conditions outlined in Section 10.02, occur, ***or*** Option No. 1 may be chosen and applied.

If the conditions of the Option No. 2 Shared-Use Facility Agreement have not been fully honored by the owner, the Shared-Use Facility shall be retested when any of the conditions outlined in Section 10.02, occurs within 8 years of the earliest test date associated with the unfulfilled Shared-Use Facility Agreement.

Testing or sanitary sewer facility replacement may be required at any time upon a determination of the General Manager for the protection of the public health, safety and welfare.

10.07 Private Sewer Maintenance Agreement

The District may require the owner of a Private Sewer System (Manufactured/Mobile Home Park, School Complex, single owner office buildings, etc.) to enter into an agreement for the maintenance and testing of sanitary sewer facilities. The agreement must be in writing and acceptable to the District and the owner of the Private Sewer System.

The owner of the Private Sewer System agrees to complete required testing, repair and replacement of ***all*** the sanitary sewer facilities servicing the Private Maintenance Agreement upon notification by the District that testing is required.

After 8 years from the latest test date, ***all*** the sanitary sewer facilities servicing the Private Maintenance Agreement shall be retested.

Testing or sanitary sewer facility replacement may be required at any time upon determination of the General Manager for the protection of the public health, safety and welfare.

10.08 Cleaning Manholes

When septic tank contents are dumped into a specified manhole under permission from the General Manager it shall be discharged through a pipe or hose in such a manner that none of the contents shall be left adhering to the sides or shelf of the manhole.

11. PROHIBITED USES OF SEWER

11.01 Discharge Permit Required

No person shall discharge, or cause to be discharged, any industrial waste into the District sanitary sewer system without having obtained an Industrial Waste Permit from T-TSA. Such permit is required in addition to any other permits that may be required by the District Code, Town Code, County Code, State Statute or other Ordinance, rule or regulation applicable to the industrial discharge.

11.02 General

It shall be unlawful for any person to do any of the following:

(a) To place, throw, or deposit, or cause or permit to be placed, thrown, or deposited in any public sewer or District sewer main pipeline any dead animal, offal, or any other solid matters, or materials or obstructions of any kind whatever of such nature as may clog or obstruct such sewer, or which may interfere with or prevent the effective use, operation, maintenance or repair of the sewer.

(b) To deposit or discharge, or cause or permit to be deposited or discharged, into any public sewer or District sewer main pipeline any water or wastewater or liquid waste of any kind containing chemicals, greases, oils, tars, or other matters in solution or suspension, in concentrations greater than 100 parts per million, by weight, which may clog or obstruct the sewer, of which may in any way damage or interfere with or prevent the effective use, operation, maintenance or repair of the sewer, or which may necessitate or require frequent repair, maintenance or flushing of such sewer to render it operable, or which may obstruct or cause an unwarranted increase in the cost of treatment of the wastewater.

(c) To discharge, or cause discharge or permit to be discharged to the sanitary sewer system any storm water, surface water, ground water, roof runoff, surface drainage, subsurface drainage, cooling water or waters of similar quality into any public sewer.

(d) To discharge any gasoline, benzene, ethylene-glycol, oil or other flammable or explosive liquid or substance into any public sewer.

(e) To discharge, or cause or permit to be discharged, any toxic or other pollutants in amounts or concentrations that (1) endanger public safety; (2) adversely impact the physical integrity of the T-TSA treatment works; (3) cause a violation of effluent to water quality limitations imposed by the Lahontan Regional Water Quality Control Board or other public entity; or (4) preclude the selection of the most cost effective alternative for wastewater treatment and sludge disposal.

(f) To connect sanitary sewer pipelines or laterals from any septic tank or cesspool to the District's sanitary sewer system.

(g) To discharge uncontaminated water into a public sanitary sewer except by written permission from the District.

(h) To allow plumbing fixtures to run water to inhibit freezing water pipes, whether the structure is occupied or not.

11.03 Garbage

Garbage resulting from the preparation of food may be discharged into the public sewer provided the materials are ground to fineness sufficient to pass through a 3/8 inch screen. The garbage grinding operation shall utilize a balanced water supply and cutting heads combination such that the operation will produce approximately 500 milligrams per liter settleable materials. The General Manager shall have sole authority to regulate the permittee's water supply and fineness gradation based on the special conditions at the site.

11.04 Temperature of Effluent

A person shall not discharge into the public sewer effluent to a temperature exceeding 140 degrees Fahrenheit.

11.05 Control of pH

Before any person shall discharge acids or alkalies into the public sewer, he shall control the pH to the extent the District finds adequate.

11.06 Toxic Substances

Any and all toxic chemical substances shall be subject to the industrial waste discharge permit requirement of T-TSA. Additionally, all toxic and chemical waste substances shall be retained on site by the permittee until they have been pretreated sufficiently to meet the discharge standards specified in the applicable Permit for the premise. The discharge of any toxic chemical substance into sanitary sewer facilities will result in the declaration of a violation and the prosecution thereof in accordance with District Code.

11.07 Removal of or Damage to Sewer

An unauthorized person shall not remove or cause to be removed, or damage or cause to be damaged, any portion of any public sewer, District sanitary sewer facility, or any appurtenances thereto.

11.08 Unauthorized Opening of the District Sanitary Sewer Facilities

An unauthorized person shall not open or enter, or cause to be opened or entered, for any purpose whatsoever, any District sanitary sewer facility. The opening of any public sewer facility may lead to a penalty. This specifically includes all manholes and vaults used as access point by District personnel. Individuals may schedule a District employee to assist them if there is a need to have a facility opened.

12. ENFORCEMENT

12.01 Violations

The permittee shall be held solely responsible for all costs that the District may incur during the investigation, correction and/or prosecution of any and all violations of the District Code. Any and all such costs shall be reviewed by the Board of Directors and, if found appropriate, the Board of Directors may institute collection procedures in accordance with the District Code.

12.02 Authority of District

The charges, fees, levies and assessed monetary levies pursuant to District Code shall be collected by the District. The District shall make and enforce the regulations as necessary to ensure the public health, safety, and welfare. The District shall also ensure the economical and efficient management protection of the District's sanitary sewer system and such regulating, collection, rebating and refunding of such charge and fees, levies and assessments as deemed appropriate by the Board of Directors.

In the event of a violation of any of the laws of the State of California, Nevada County, Placer County, Town of Truckee or the ordinances of the District or rules and regulations so established referring to the discharge of wastewater, the District shall notify the person or persons causing, allowing, or committing such violation and upon the failure of such person or persons to cease or prevent further violation within 5 days after the receipt of such notice or ten days after the District mailing of the notice (first-class mail), whichever occurs earlier, the District shall, after giving 10 days' notice as outlined in Section 12.07, Notice and Hearing Prior to Discontinuance Other Than a Discontinuance of Service for Non-Payment, have authority to disconnect the property from the District sanitary sewer system.

12.03 Public Nuisance

Continued habitation of any building or continued operation of any commercial or industrial facility in violation of the provisions of the District Code or any other ordinance, rule or regulation of this District is hereby declared to be a public nuisance. The District may cause proceedings to be brought for the abatement of the occupancy of the building or industrial facility during the period of such violation.

12.04 Public Nuisance, Abatement

During any period of disconnection, habitation of such disconnected premises by human beings shall constitute a public nuisance, whereupon the District may cause or petition legal proceeding to be brought for the abatement of the occupancy of said premises by human beings during the period of such disconnection. In such events, and as a condition of re-connection, the applicant for re-connection shall pay to the District all costs incurred by the District associated with the disconnection and the legal proceedings. Such costs shall include but not be limited to reasonable attorney fees and the costs of suit(s) arising out of any such action.

12.05 Discontinuance of Service

Service may be discontinued for any one of the following reasons:

(a) Delinquency in the payment of any bill, except that service shall not be discontinued for nonpayment in any of the following situations:

1. During the pendency of any investigation by the District of a customer dispute or complaint.

2. When a customer has been granted an extension of the period for payment of a bill.

3. On the certification of a licensed physician or surgeon that to do so will be life threatening to the customer.

4. If the customer is financially unable to pay for service within the normal payment period, yet is willing to enter into an amortization agreement with the District and requests permission to amortize, over a period not to exceed 12 months, the unpaid balance of any bill asserted to be beyond the means of the customer to pay within the normal payment period.

(b) Any violation by the customer of any rules and regulations of the District governing sewer service.

(c) Unsafe Apparatus or Damaging Conditions. If an unsafe or hazardous condition is found to exist on the customer's premises, or if the customer's use of sewer service is found to be detrimental or damaging to the District or its other customers, the District may discontinue sewer service without notice, provided that the District shall notify the customer immediately of the reasons for the discontinuance and the corrective actions to be taken by the customer before service can be restored. If the District determines that the need for the discontinuance stems from the customer's failure to adequately maintain the customer's building lateral or the customer's improper use of the building lateral or is otherwise caused by the customer's actions/inactions, then the customer will be liable for the District's cost of discontinuance and re-connection, if any, as well as any corrective actions required by the District.

12.06 Notice and Hearing Prior to Discontinuance

At least 10 days before any proposed discontinuance of service for nonpayment of a delinquent account, the District shall mail a notice, postage prepaid to the customer to whom the service is billed of the proposed discontinuance. Such notice shall be given not earlier than 19 days from the date of mailing the District's bill for such service and the10 day period shall not commence until 5 days after the mailing of the notice. In addition to the 10 day notice provided for in the preceding sentence, the District shall make a reasonable, good faith effort to contact an adult person residing at the premises of the customer by telephone or in person at least 48 hours prior to any discontinuance of such service.

Every notice of discontinuance of service required by this section, shall include all of the following information:

- The name and address of the customer whose account is delinquent.
- The amount of delinquency.
- The date by which payment or arrangements for payment is required in order to avoid discontinuance.
- The procedure by which the customer may initiate a complaint or request an investigation concerning service or charges, unless the District's bill for services contains a description of that procedure.
- The procedure by which the customer may request amortization of the unpaid charges.
- The procedure for the customer to obtain information on the availability of financial assistance including private, local, state, or federal sources, if applicable.
- The telephone number and name of a representative of the District who can provide additional information or institute arrangements for payment.

12.07 Notice and Hearing Prior to Discontinuance other than a Discontinuance of Service for Non-Payment

In order to effect its powers, the District may enter upon private property for the purpose of inspection and maintenance of sanitary and waste disposal facilities and may terminate service to property in which a violation of any rule or regulation is found to exist.

Prior to termination of service, however, the General Manager or designee thereof shall notify, in writing, the owner and tenant, if any, of such property that service is intended to be so terminated and conduct a hearing thereon as herein provided. Such notice shall be mailed to the owner at the address shown on the records of the assessor of the county and may also be mailed to such address as known to the District, and a copy shall be delivered to the tenant or posted conspicuously on the property. The notice shall state the date of proposed termination of service and the reasons therefore and the date the District Board shall hold a public hearing upon such intended termination. Such hearing shall not be held less than 10 days subsequent to the giving of notice as herein required.

12.08 Discontinuance of service on Weekends, Holidays or After Hours

No sewer service shall be discontinued to any customer or user because of any delinquency in payment on any Saturday, Sunday, legal holiday, or at any time during which the business offices of the District are not open to the public.

12.09 Amortization of Delinquent Bill for Service

Every complaint or request for investigation by a customer that is made within 5 days of receiving the disputed bill, and every request by a customer that is made within 13 days of the

mailing of the notice required by Section 12.05, Discontinuance of Service, for an extension of the payment period of a bill asserted to be beyond the means of the customer to pay in full during the normal period of payment shall be reviewed by the General Manager. The review shall include consideration of whether the customer shall be permitted to amortize the unpaid balance of the account over a reasonable period of time, not to exceed 12 months. Any customer, whose complaint or request for an investigation has resulted in an adverse determination by the General Manager, may appeal the determination to the Board of Directors.

12.10 Authority to Settle Controversies Relating to Discontinuance and to Permit Amortization of Delinquent Bills

The General Manager is hereby authorized to investigate complaints and review disputes pertaining to any matters for which service may be discontinued and to rectify errors and settle controversies pertaining to such matters. The General Manager is also authorized, upon a proper showing by a customer of the customer's inability to pay a delinquent bill during the normal period, to grant permission to amortize the unpaid balance over a reasonable period of time, not to exceed 12 months. At the discretion of the General Manager, controversies may be brought to the Board of Directors for settlement prior to the discontinuance of any such service.

12.11 Notice Required Prior to Discontinuance of Service for Failure to Comply with Amortization Agreement

If an amortizing agreement is authorized, no discontinuance of service shall be effected for any customer complying with such agreement, if the customer also keeps the account current as charges accrue in each subsequent billing period. If a customer fails to comply with an amortization agreement, the District shall not discontinue the service without giving notice to the customer at least 48 hours prior to discontinuance of the conditions the customer is required to meet to avoid discontinuance, but the notice does not entitle the customer to further investigation by the District.

12.12 Enforcement of Provisions

The provisions of the District Code and a violation of failure to comply with any provision of the District Code, may be enforced, prosecuted and/or corrected pursuant to Health and Safety Code Sections 6523, 6523.2 and 6523.3, the penalty provisions of the District ordinance that adopted this code by reference, and/or other applicable provisions of law.

12.13 Means of Enforcement Only

The District hereby declares that the foregoing procedures are established as a means of enforcement of the terms and conditions of its ordinances, rules and regulations, and not as a penalty.

12.14 Cumulative Remedies

All remedies set forth herein for the collection and enforcement of charges, rates, and penalties are cumulative and may be pursued alternatively or concurrently.

12.15 Appeals Procedure

For any matter not within the scope of Sections 12.05-12.11 herein, any person aggrieved by a ruling under or interpretation of the provisions of the District Code may submit a written appeal to the General Manager within 90 days of the date that the applicant is advised. The appeal shall set forth the events and circumstances leading to the appeal, the nature of the ruling or interpretation from which relief is sought, the nature of the impact of the ruling on appellants' property or business, together with any other reason for the appeal.

Should the aggrieved person not be satisfied with the determination of the General Manager, that person may appeal the decision of the General Manager to the Board of Directors within 60 days of the date that the General Manager's determination is made. The General Manager shall then submit such appeal together with his/her recommendations to the Board of Directors which shall forthwith study the matter, hear testimony and reasons for such appeal, and prepare a written decision summarizing the findings and ruling of the Board which shall be sent to the appellant within 30 days of the conclusion of the Board hearing.

After a decision is reached by the Board of Directors which results in the granting, denying, or revocation of a permit, the appellant must bring any legal action against the District within the time limits set forth in Section 1094.6 of the Code of Civil Procedure which provisions are applicable to the District.

12.16 Re-connection to the District's Sanitary Sewer System

After disconnection of sanitary sewer service to any premises for any reason, the re-connection of such premises shall be subject to all provisions of the District Code and/or Ordinance applicable thereto.

12.17 District Code Authority

To the extent that the terms and provisions of this ordinance may be inconsistent or in conflict with the terms or conditions of any prior District ordinances, resolutions, rules or regulations governing the same subject, the terms of this ordinance shall prevail with respect to the subject matter thereof, and such inconsistent and conflicting provisions of prior ordinances, resolutions, rules or regulations are hereby repealed.

If any section, subsection, provision or part of this ordinance, or its application to any person or circumstance, is held to be unconstitutional or otherwise invalid, the remainder of this ordinance, and the application of such provision to other person or circumstances, shall not be affected thereby and shall remain in full force and effect and, to the end, the provisions of this ordinance are severable.

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APPENDIX A-1
DEPOSITS, INSPECTION CHARGES AND SPECIAL FEES

DEPOSITS

Residential Permit Deposit	$ 1,500.00
Commercial Seal Cap Deposit	$ 1,000.00
Commercial Plan Check Review Deposit	$ 500.00
Sewer Main Tapping Deposit (Standard Minimum)	$ 750.00
Preliminary Sewer Lateral Agreement Deposit	$ 2,500.00
Sewer Main Tapping Deposit (Special Conditions)	Determined on Case-by-Case Basis
Commercial Project Deposits	Determined by Plan Check
Other	Determined by the General Manager

INSPECTION CHARGES

Residential	$ 350.00
Supplemental Residential Pump Inspection Fee	$ 500.00
Others	At Cost

SPECIAL FEES AND CHARGES

Unauthorized Seal Cap Removal	$ 1,000.00
Preliminary Sewer Lateral Agreement	$ 150.00
Permit Extension	$ 100.00
Permit Cancellation	$ 150.00
Owner-builder Temporary Trailer Hook Up	$ 200.00
Annexation Fee per Acre	$ 100.00
Return Check Fee	$ 35.00
Copy Service, 8 1/2 x 11	$0.50 per Page
Other	Determined by the General Manager

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APPENDIX A-2
TRUCKEE SANITARY DISTRICT CONNECTION FEE SCHEDULE

Type of Connection	Unit of Measure	Billing Code	Fee / Unit
Residential [1]	Dwelling Unit	R	830.00 /unit plus 0.41 /sq.ft.
Commercial Establishments (unless otherwise noted below)	# of Plumbing Fixture Units [2]	B	110.00
Hotel/Motel (without kitchen)	Dwelling Unit	M	446.00
Hotel/Motel (with Kitchen)	Dwelling Unit	N	578.00
Campsite (with sewer)	# of Sites	K	414.00
Campsite (without sewer)	# of Sites	Q	314.00
Markets	# of Plumbing Fixture Units [2]	G	110.00
Laundries	# of 10 lb Machines	L	528.00
	# of 20 lb-50 lb	X	1056.00
Restaurants & Bars	# of Inside Seats	F	110.00
	# of Outside Seats	Z	55.00
	# of Banquet Seats	Y	40.00
Theaters	# of Seats	T	18.00
Churches	# of Seats	C	18.00
Hair Salon - Type 1	# of Service Chairs	H	462.00
Hair Salon - Type 2	# of Service Chairs	A	826.00
Unclassified Service [3]	# of Units	E	55.00
Other	As determined by the General Manager	S	28.00

(1) Connection Fees for Residential living space additions greater than 500 sq.ft. where sewer connection is already established will be charged $0.41 / sq.ft.

(2) Refer to Appendix A-4

(3) This factor serves as a multiplier to hold the correct values on an account.

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APPENDIX A-3
TRUCKEE SANITARY DISTRICT USER FEE SCHEDULE

Type of Connection	Unit of Measure	Billing Code	Fee / Unit / Month
Residential	Dwelling Unit	R	21.30
		RR[1]	27.92
Commercial Establishments (unless otherwise noted below)	# of Plumbing Fixture Units [2]	B	1.29
		BB[1]	1.68
Hotel/Motel (without kitchen)	Dwelling Unit	M	5.77
		MM[1]	7.55
Hotel/Motel (with Kitchen)	Dwelling Unit	N	7.46
		NN[1]	9.77
Campsite (with sewer)	# of Sites	K	5.34
		KK[1]	6.99
Campsite (without sewer)	# of Sites	Q	4.06
		QQ[1]	5.32
Markets	# of Plumbing Fixture Units [2]	G	1.29
		GG[1]	1.68
Laundries	# of 10 lb Machines	L	6.81
		LL[1]	8.93
	# of 20 lb-50 lb Machines	X	13.64
		XX[1]	17.87
Restaurants & Bars	# of Inside Seats	F	1.29
		FF[1]	1.68
	# of Outside Seats	Z	0.65
		ZZ[1]	0.85
	# of Banquet Seats	Y	0.45
		YY[1]	0.60
Theaters	# of Seats	T	0.21
		TT[1]	0.29
Churches	# of Seats	C	0.21
		CC[1]	0.29
Hair Salon - Type 1	# of Service Chairs	H	5.96
		HH[1]	7.82
Hair Salon - Type 2	# of Service Chairs	A	10.66
		AA[1]	13.96
Unclassified Service [3]	# of Units	E	0.65
		EE[1]	0.87
Other	As determined by the General Manager	S	0.33
		SS[1]	0.44
Temporary Discharge	Per 1,000 Gal.	D	3.05
		DD[1]	3.98
Public Schools [4]	Per 1,000 Gal.	---	3.98

(1) These rates apply to parcels from which the District receives no annual property tax revenue.

(2) Refer to Appendix A-4

(3) This factor serves as a multiplier to hold the correct values on an account.

(4) Refer to Section 3.12

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APPENDIX A-4
PLUMBING FIXTURE UNIT EQUIVALENTS

FIXTURE	PRIVATE	PUBLIC
Bathtub (with or without shower)	2	4
Dental Unit or Cuspidor	-	1
Drinking Fountain (each head)	-	1
Kitchen Sink	2	4
Laundry Tub (each pair faucets)	2	4
Clothes washer	2	4
Lavatory	1	2
Shower (each head)	2	4
Sink (Bar)	1	2
Sink or Dishwasher	2	4
Sink (Flushing rim, Clinic)	-	10
Sink (Wash up, each set of faucets)	-	2
Sink (Wash up, circular spray)	-	4
Sink (with garbage disposal)	3	4
Sink (Use by Medical Professional only)	1	-
Urinal	3	5
Toilet	3	5
Floor Drain	1	2
Swimming Pool "S" Units		
0 - 25,000 gallons	-	23
25,001 - 50,000 gallons	-	46
50,001 - 75,000 gallons	-	69
75,001 – 100,000 gallons	-	92
100,001 gallons and over	-	115
Jacuzzi/Hot Tub "S" Units		
0 – 1000 gallons	-	16
1,001 – 2,500 gallons	-	39
2,501 – 5,000 gallons	-	78
5,001 gallons and over	-	116

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APPENDIX A-5
MULTIPLE USE FORMULA TABLE

The purpose of the Multiple Use Formula is to ensure that Property Owners are not overcharged when restrooms are shared by both a restaurant patron, and other businesses in the same building. For example, a ski area may have a large restaurant with restrooms just outside the restaurant entrance. These restrooms are not solely provided for restaurant patron use. They are available to other ski area patrons as well. The following table determines the Multiple Use Credit the District will apply towards the total number of multi-use plumbing fixture units on the parcel, and is based on the quantity of restaurant seats.

# of Restaurant Seats	**# of Plumbing Fixture Unit Credits**
1-50	12
51-100	15
101-200	21
201-300	27
301-400	33
401-500	39
501-600	45
601-700	51
701-800	57
801-900	63
901-1000	69
1001-1100	75

The multiple use policy applies to both connection fees and semi-annual user fee charges. Existing accounts will retain any excess connection fee allocation resulting from the application of the multiple use credit.

Example: A restaurant has 75 inside restaurant seats and has 28 restroom plumbing fixture units available for use by non-restaurant patrons. It receives credits for 15 plumbing fixture units as shown in the table above. Therefore the restaurant will be charged connection and user fees for 13 plumbing fixture units (the 28 actual restroom plumbing fixture units less the credit for the 15 units).

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APPENDIX A-6
MATERIALS FOR CONSTRUCTION OF SANITARY SEWERS

GRAVITY PIPELINE INSTALLATIONS

Gravity pipe shall contain a flexible gasket in the bell section to provide an airtight seal in the joint.

Type of Pipe	Class of Pipe	Minimum Cover Non-Traffic	Minimum Cover Traffic	Maximum Cover
PVC	SDR 35	30"	48"	12'
PVC	C900 DR 25 OR SDR 26	30"	48"	16'
PVC	C900 DR 18	30"	30"	28'
PVC	C900 DR 14	30"	30"	-
DI	CL 51 or greater	30"	30"	-

PRESSURE PIPELINE INSTALLATIONS

Force main pipelines shall be designed and approved on a case-by-case basis. Considerations shall include design static and dynamic pressures, pressure cycling, alignments, and any other condition considered unique to the project. Piping shall be a minimum 2" nominal diameter for non-clog pumps and 1 ¼" nominal diameter for grinder pumps with a pressure rating equal to or greater than the pump system requirements.

Type of Pipe	Minimum Class of Pipe	Minimum Cover Non-Traffic	Minimum Cover Traffic
PVC	SCH 40 Welded Joint	30"	30"
PVC	DR18 CL 150*	30"	30"
HDPE	DR 13.5	30"	30"
DI	CL 51	30"	30"

*Blue pipe is not acceptable

INSTALLATION OF COUPLINGS

Building Laterals
Rigid or flexible couplings may be used on building laterals.

Gravity Main Pipelines
Coupling on pipelines shall be rigid or flexible with anti-shear bands on pipes of similar material, or flexible couplings on pipes composed of different material.

Pressure Pipelines
Rigid couplings are required on pressure pipelines.

NOTE: Flexible couplings shall be Bond Seal, Fernco, Indiana Seal, or other approved coupling. Rigid couplings shall be PVC, Romac, Bond Seal Anti Shear, Fernco Anti Shear, Indiana Seal Anti Shear or other approved coupling.

NOTE: The use of any other pipe material for construction of sanitary sewer facilities, other than that listed above, must be approved in writing by the District.

APPENDIX A-7
DISTRICT STANDARD SPECIFICATIONS

A-7.1 Scope

The District Standard Specifications constitute a compilation of standards for sewer system design, development, repair and construction. The purpose of these standards is to establish quality guidelines for sewer system design and construction within the District. These standards shall apply to all sanitary sewer facilities constructed within the boundaries of the District.

The owner shall, at all times, keep themselves fully informed of, and shall observe and comply with all applicable Federal and State Laws; Nevada/Placer County, Town of Truckee, and special district ordinances, resolutions, rules and regulations which in any manner effect the design, construction or operation of the sanitary sewer system and its appurtenances.

All developments/projects are handled on a first come, first serve basis. There are specific administrative requirements for developments and projects which involve the installation of sewer facilities. The District has produced a "Development Guidelines" packet to assist you. The owner shall be required to submit the necessary application and associated forms to the District to facilitate this procedure. "Development Guidelines" packets may be obtained at the District office.

A-7.2 Design Standards

With regard to wastewater design flows, the designer shall use current and/or proposed land use designations. Population densities will vary, being controlled largely by the number of residential lots per acre and other land uses. All wastewater design flow estimates shall incorporate equivalent population for public schools, commercial, and industrial uses. These figures shall be indicated on the set of improvement plans submitted for approval. Design calculations shall assume all pipes to have a Manning's n = 0.013. For design purposes, gravity sewer mains shall be considered at capacity when the ratio of the water depth to pipe diameter (d/D) is equal to 0.8.

Residential Design Flow
For design purposes, an average flow of 230 gallons per day per single family residential unit shall be assumed. Peak flows shall be estimated using Chart A-7.2. In large sanitary sewer systems, consideration should be given to concentrations of peak flows.

Commercial Design Flow
Wastewater drainage systems for commercial applications shall be designed to meet the requirements of the Uniform Plumbing Code.

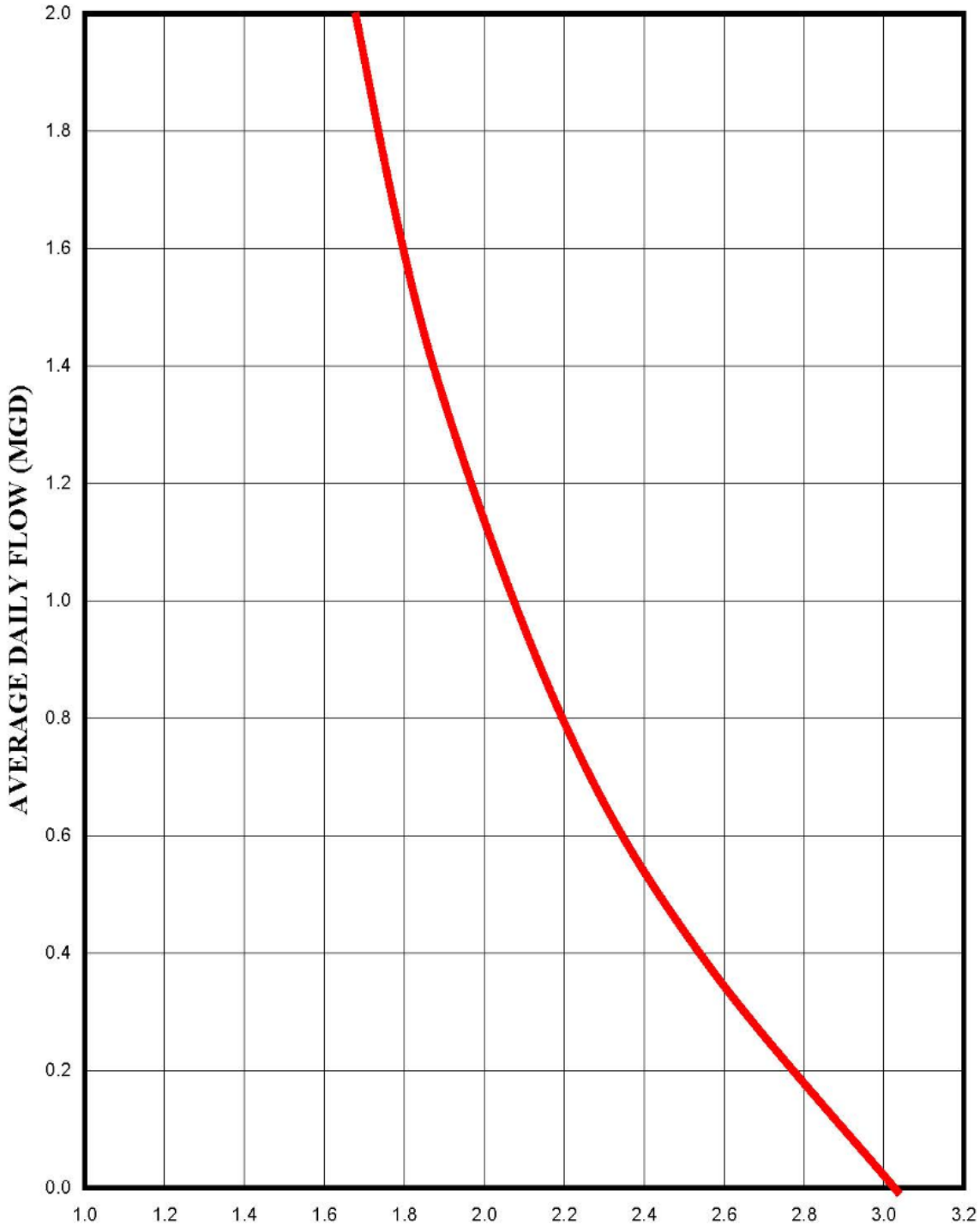
Horizontal Alignment

Sanitary sewer grades shall be designed to provide a minimum velocity of 2 feet per second when fully flowing. The following table indicates the slopes which will provide that velocity, and these shall be used as the standard for design. Minimum acceptable slopes are also shown. These minimum slopes shall be used only when topographic features preclude standard slopes and require written approval from the General Manager for their use.

	SLOPE IN FEET/FOOT	
Diameter	**2 Feet/Second Flow**	**Minimum Acceptable**
4"	0.0208 (1/4" per foot)	0.0104 (1/8" per foot)
6"	0.0050	0.0035
8"	0.0035	0.0025
10"	0.0025	0.0015
12"	0.0020	0.0008
15"	0.0016	0.0007
18"	0.0012	0.0006

Whenever a change in the size of the pipe, or an angle of 20 degrees or greater in alignment occurs, the flow line of the pipe flowing into manholes shall be a minimum of 0.17 feet above the flow line of the pipe flowing from the manhole, or an amount necessary to match the inside crowns of the pipe, whichever is greater.

AVERAGE TO PEAK FLOW RELATIONSHIP
CHART A



Location and Alignment of Sanitary Sewer Facilities
All sanitary sewer facilities to be dedicated to the Truckee Sanitary District shall be constructed and installed within rights-of-way dedicated for public streets or roads, or within sanitary sewer easements, unless such construction or installation is determined to be impractical by the General Manager.

Whenever it is essential that curved alignment be used for sanitary sewer pipelines, a radius of not less than 200 feet will be used, and shall be greater whenever possible. No sanitary sewer facility, including building laterals, shall be located within 50 feet of a water well. Any sanitary sewer pipeline located between 50 feet and 100 feet of a water well shall be constructed of ductile iron with rubber type ring joints.

Location of Sanitary Sewer Facilities with Respect to Other Utilities
Sanitary sewer main pipelines running parallel to water mains must maintain at least a 10 foot horizontal separation. Sanitary sewer main pipelines crossing water mains shall maintain at least 1 foot vertical separation and shall meet Uniform Plumbing Code requirements for pipeline types, joint locations, and encasement or sleeving.

The location of building laterals with respect to water service connections running parallel in a common trench shall meet the requirements of the Uniform Plumbing Code, Section 720.0 which states in part:

- The bottom of the water pipe, at all points, shall be at least 12 inches above the top of the sewer pipeline, and

- The water pipe shall be placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer.

The spring line of building lateral crossing water pipes shall be at least 12 inches below the bottom of the water pipe and shall meet Uniform Plumbing Code requirements for pipeline types, joint locations, and encasement or sleeving.

Sanitary sewer main pipelines running parallel to other utilities (e.g., natural gas, storm drain, electrical lines, communications) shall be installed so that a minimum of 4 ft of horizontal separation exists between the closest points of the pipes. Sewer laterals shall be installed so that a minimum of 18 inches of horizontal separation exists. Sanitary sewer main pipelines running perpendicular to other utilities shall be installed so that a minimum of 1 ft of vertical separation exists and the sewer pipe should be centered such that the distance from the utility crossing to the joints is maximized.

Natural gas pipes are prohibited from sharing a joint trench with sewer mains or laterals.

Pipe Cover
The depth of any sanitary sewer main pipeline or lateral shall be adequate to obtain a minimum cover of 30 inches. Any exception to this rule must have prior approval of the General Manager.

Manhole Spacing
Normal maximum spacing for manholes shall be 400 feet. Where the location of two manholes are determined by intersecting lines, the distances between intervening manholes shall be

approximately equal. Sewers on curved alignment with a radius of less than 400 feet shall have manholes spaced at a maximum of 300 feet and adjusted down to fit the individual case. Curved alignment shall not be used unless specifically permitted by the General Manager.

The maximum spacing of manholes on outfall sewer pipelines of 12 to 24 inches shall be 500 feet.

End of Line Cleanouts
An end of line cleanout may be used in lieu of a terminus manhole only with the approval of the General Manager. See Standard Drawings, End of Line Cleanout Assembly, Figure 5.

End of Line Manholes (Terminus)
An end of line manhole shall have a trough not less than three quarters the diameter of the manhole base. This will allow ingress of cleaning and televising equipment.

Sanitary Sewer Service Connections
In all new subdivision work, the sewer service lateral from the sewer main pipeline to the property line shall be installed at the time the sewer main pipeline is constructed.

Whenever a sewer main pipeline is installed which will serve existing houses or other buildings, a sanitary sewer service connection shall be constructed for each such existing house or building. Each sanitary sewer service connection shall be referenced to the plan stationing.

A plan and profile of any sanitary sewer service connection, other than for a single family or two family dwelling, shall be submitted in accordance with the District Code.

Sanitary sewer service laterals may be connected to outfall sewer pipelines (pipelines 12 inches in diameter or larger) at manhole locations only, and only when the depth of the outfall sewer pipeline does not exceed 12 feet from finished grade.

Wastewater Lift Stations and Force Mains
Whenever the design of a sanitary sewer system includes the necessity of a wastewater lift station and a force main, the following data shall be submitted for tentative approval prior to construction:

Pumps

- The design flow computations for the pumping system which includes both the pumps or ejectors, and the force main.

- The type, size, and model of pump to be used. Pumps shall be similar in design and manufacture to existing District equipment if possible. Pump curves shall be supplied with all design parameters and system curves marked.

Site

- A plot plan showing the dimensions of the site and its location with respect to homes or other structures. Minimum distance from a lift station to any residence shall be 50 feet except with advance approval of the General Manager for each specific case.

- Section and plan views of the wet well and all other structures to be constructed.

Electrical and Telemetry

- The design computations for electrical loads for pumps and all other equipment.

- Control equipment electrical diagrams. Control equipment shall be equal to design and manufacture of currently used control equipment in the District if possible.

- Telemetry electrical diagrams. Telemetry equipment shall be equal to design and manufacture of currently used telemetry equipment. All telemetry equipment shall be compatible with the District's most current telemetry system whether that system is in use or being implemented.

- Electrical standby system design. Electrical system shall incorporate a standby power system consisting of a safety switch and generator plug combination. Stations being dedicated to the District and serving more than 9 residences shall also include a generator and transfer switch combination depending on pumping station size, design flow, and type. Designation shall be by the General Manager.

- Method of storage of 1 hour of peak flows in case of pump failure (i.e. storage tank or oversized lines).

Force Main

- The size and type of pipe to be used.

- The size and type of fittings to be used.

- The tentative alignment of pipe and locations of bypass ports if required. Bypass ports shall incorporate valve and fitting types that match current District bypass port design and usage (see Standard Drawings, Bypass Port (single), Figure 23, and Bypass Port (double), Figure 24).

- A single bypass port shall be located at the pump stations. Additional double bypass ports shall be located at accessible locations with a maximum distance between ports of 1,500 feet.

- Force mains shall discharge into dedicated manholes that have no other input of sewage (see Standard Drawing, Force Main Detail (siphon break at manhole), Figure 13).

The force main shall be marked with tracer wire. Tracer wire shall consist of 10 AWG minimum with THW, THHW, TW, THWN, or other approved wet location insulation. Wire shall be attached to the top of the force main with tape at appropriate intervals. Wire shall be continuous between vaults and other access points where excess wire shall be spooled to provide connection

points. Splices shall incorporate approved underground splice kits. Each run of tracer wire shall be tested for continuity following backfill.

Mobile Home and Recreational Vehicle Parks
Whenever the design of a sanitary sewer system involves mobile home and/or recreational vehicle parks, additional requirements to those in the Uniform Plumbing Code, may be necessary due to the environment (see Standard Drawings, Utility Pad Installation, Figure 11).

A-7.3 Criteria for Improvement Plans

Format of Improvement Plans
Improvement plans for sanitary sewer improvements shall be prepared on standard FAS sheets (24 x 36 inches). Scales are to be as follows except in unusually rough terrain where the scales may be variable. Horizontal 1 inch – 100 feet or 1 inch = 40 feet, Vertical 1 inch = 10 feet or 1 inch = 5 feet.

On subdivision or improvement plans exceeding three sheets in the set, a title sheet shall be prepared showing the entire subdivision or project, Assessment District, Town Limits, Street Names, Section and/or grant lines and corners; and the location within the County. The owner shall provide a list of symbols and abbreviations either on the title sheet or in the specifications.

The title sheet also shall include the Engineer's name, and license number and signature; the date and scale of the drawing; and the blocks for the necessary approval of the General Manager and other officials.

Each set of improvement plans submitted to this office shall have a suitable index map showing the overall area to be developed and the sheet index referring to the construction improvement plans.

Each sheet within the set of drawings shall have an approved title block showing the sheet title, number, date, scale and the Engineer's name and license number, and the name of the Subdivision or Assessment District.

Approval blocks shall appear on the title sheet and all detail sheets that have details to be approved by the District. There shall be one block for "Approved" to be signed by the General Manager. The block shall have space to be dated.

Example: These improvement plans have been reviewed and approved for construction of the sanitary sewer.

Approved: TRUCKEE SANITARY DISTRICT

_____ _____

General Manager and Chief Engineer **Date**

Special notes shall be clearly indicated, and it shall be conspicuously noted on the improvement plans that all construction work and installations shall conform to the District Code and that all

work is subject to the approval of the General Manager. The following phrase shall be noted on the improvement plans:

"All sewerage works to meet or exceed Truckee Sanitary District Code requirements"

Plan and Profile Sheet Requirements
The improvement plans shall clearly show the existing and proposed alignments and profiles of the sanitary sewer(s) in relation to roadways, drainage ditches, storm drains or any other underground utility. The improvement plans shall show all areas of conflict and minimum clearances between sanitary sewer and water facilities. Ground surface profiles must be shown.

The stationing on plan and profile shall read from left to right. In so far as practical the improvement plans shall be so arranged that the north arrow is either pointed toward the top or to the right edge of the sheet.

Detail Sheet Requirements
Detail sheets of all sanitary sewer facilities (manholes, cleanouts, traps, interceptors, wet wells, pump stations, etc.) shall be included in the improvement plans. Typical trench sections shall also be included in the improvement plans.

Cross Sections shall be included in the improvement plans, where determined necessary by the General Manager.

Inclusion of Datum and Legal Boundaries
The benchmarks and datum shall be clearly pointed out on the improvement plans both as to location, description and elevation. The datum shall be U.S.C & G.S., 1927 North American Datum.

It is desired and encouraged that proposed improvements be tied into the California Coordinate System if monument coordinate points are available within a reasonable distance of said improvement.

Right-of-way lines, the boundaries of lots fronting on the street, drainage easements, utility easements, section lines and corners, land grant lines, and temporary construction easements both existing and proposed shall be shown on the improvement plans. All right-of-way and easement lines shall be properly dimensioned.

Topographic Features
All pertinent topographic features shall be shown such as street lines, curbs, sidewalks, shoulders, existing structures, houses, trees and other foliage, drainage ditches, utility poles, fire hydrants, and all other features of the area which may affect the design requirements for the project.

Existing and proposed substructure location and size; i.e., storm and sanitary sewer pipelines; water and gas pipelines; electrical, telephone, cable TV conduits; and any other buried utilities which may affect the design requirements of the project, shall be noted.

A-7.4 Record Drawings/Electronic Data

The owner of a newly constructed commercial development containing sanitary sewer facilities shall prepare and submit Electronic Data upon the approval of the project. The designer/engineer shall contact the District regarding the format and submission of the electronic data.

At the completion of the project, all approved construction changes and/or final dimensions delineated on the improvement plans shall be submitted to the District in electronic format as the Record Drawings. The designer/engineer shall contact the District regarding the format and submission of the electronic data. The set of as constructed improvement plans submitted to the District shall have the words "Record Drawings" in one inch high letters on each sheet.

Dimensions and locations shall be sufficient for locating the constructed improvements. Dual swing ties are required for all stub outs and cleanout risers. Permanent objects such as property corners, power poles, water boxes, structures, etc. shall be used for swing ties.

Sewer facilities (e.g., manholes, lift stations, laterals) on Record Drawings shall include TSD identification names as provided by the District.

In the case that the sanitary sewer facilities are to be dedicated to the District, the General Manager shall approve the Record Drawing improvement plans prior to any District acceptance of the completed system.

A-7.5 Construction Administration

Installation of new sanitary sewer facilities or alteration to existing facilities requires inspection during construction by an authorized representative of the District. Each phase of construction must be inspected and approved prior to proceeding to subsequent phases.

Any improvements constructed without inspection as provided herein or construction contrary to the orders or instructions of the authorized representative of the District, will be deemed as not complying with these specifications and will not be accepted by the District.

Adequate notice shall be given the District prior to the beginning of construction operations in constructing sanitary sewer facilities so that arrangements may be made by the District to provide adequate inspection.

Conformity with Improvement Plans and Allowable Deviation
Deviations from the approved improvement plans, as may be required by field conditions during construction, shall require written approval by the General Manager.

Alteration of Improvement Plans
All authorized alterations affecting the requirements and information given on the approved improvement plans shall be in writing. No changes shall be made of any plan or drawing after the same has been approved by the District except by direction of the General Manager.

Working drawings or plans for any facility not included in the improvement plans furnished by the owner shall be approved by the District prior to commencement of any work involving such facility.

Authority of the District Inspector
The periodic inspection performed by the various inspectors employed by the District shall not constitute approval or ratification of work improperly completed by the contractor.

Final Inspection
Upon completion of any improvements which are constructed under and in conformance with this Code, and prior to requesting final inspection, the area shall be thoroughly cleaned of all rubbish, excess material and equipment; and all portions of the work shall be left in a neat and orderly condition satisfactory to the District. The final inspections may include Ball and Flush of the pipelines, Mandrel Tests, Television Inspection, Air, Water, or Vacuum tests and/or any other tests deemed necessary by the District.

The General Manager will require copies of all Grant Deeds for easements given to the District as a part of sanitary sewer facility installation. Field verification of such easements may be required.

After receiving the request for final inspection, the District will inspect the work. The contractor and/or owner will be notified in writing as to any particular defects or deficiencies to be remedied. The contractor shall proceed to correct any such defects or deficiencies at the earliest possible date. At such time as the work has been completed, a second inspection shall be made by the District to determine if the previously mentioned defects have been repaired, altered and completed in accordance with this Code. Once the final inspection has been found to be complete by the District, the contractor and/or owner may offer facilities for dedication to the District. The owner will be notified in writing as to the date of final approval and acceptance by the District Board of Directors.

A-7.6 Legal Relations and Responsibility

District Liability
Neither the District, the General Manager or any other officer or agent of the District shall be personally responsible for any liability arising under any contract between the developer and any contractor or subcontractor.

District Responsibility
The District shall not be held responsible for the care or protection of any material or parts of the work prior to final acceptance.

The District and its representatives, in establishing this Code, and in performing any services, or making any examinations, tests, or inspections hereunder, shall not be liable in any way to any person by reason of any injury, damage, costs, or expenses sustained or caused as a result thereof; nor shall any such services, examinations, tests or inspections constitute any warranty in reference thereto on the part of the District or its authorized representatives, and the relationship of the District to the contractor, or developer shall be solely that of independent contract and not joint venture, partnership, or otherwise.

That the developer shall at its sole cost and expense hold the District harmless from and defend the District against all claims, charges, demands or causes of action arising out of or in any manner whatever connected with any act, activity or work made, completed or undertaken hereunder by the developer, its contractor, engineer, or agents, or employees thereof.

Nothing herein contained shall be deemed to modify, limit, or restrict the rights, duties, and obligations given or granted to said District by the laws of the State of California now in effect or hereafter from time to time adopted, including without limitations the right to amend or modify this Code at any time, and if any part of this Code be determined to be unconstitutional, such determination shall not render ineffective or invalid the remaining provisions therein contained and set forth.

Responsibility for Damage

The District, the General Manager and all officers, agents and employees of the District shall not be answerable or accountable in any manner thereof; or for any of the materials or other things used or employed in performing the work; or for injury to any person or persons either workmen or the public, for damage to property from any cause which might have been prevented by the developer or anyone employed by him against all of which injuries or damages to persons and property the developer having control over such work, must properly guard.

The developer shall be responsible for any liability imposed by law of any damage to any persons or property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance.

The developer shall indemnify and save harmless the District, the General Manager and all officers, agents and employees of the District from all suits or actions of every name, kin, description brought for or on account of any injuries or damages received or sustained by any person or persons by or from the developer, his/her agents in the construction of the work or by or in consequence of any negligence in guarding the same, any improper materials used in its construction or by or on account of any acts or omission of the developer or his/her agents.

Developer's Responsibility for Work

Except as provided above, until the formal acceptance of the work by the District, the developer or his/her contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution, or from the non-execution of the work. The developer or his/her contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof.

All public or private facilities, including but not limited to gravel surfacing at existing canals, structures, telephone cables, roadways, curbs, gutters, parking lots, private drives, levees and embankments for creeks, ponds and reservoirs disturbed during construction of the work shall be repaired and/or replaced by the contractor to match facilities existing prior to construction. In addition, the contractor shall be responsible for any settlement damage to such facilities or adjoining areas for a period of one year after acceptance of such required facilities.

Public Convenience

It shall be the owner's responsibility to provide for the passage of public traffic through the work during construction. When work is to be performed in existing traveled streets or roads, trench spoil shall be placed so as to offer the least possible obstruction and inconvenience to public traffic. The owner shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public.

All public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. Bridges of approved construction shall be installed and maintained across trenches at all crosswalks, intersections and such other points where, in the opinion of the General Manager, traffic conditions make it advisable.

Spillage resulting from hauling operations along or across any publicly traveled way shall be removed immediately by the owner at their expense.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property.

Convenient access to driveways, houses and buildings along the line of the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition. When the abutting owner's access across the right-of-way line is to be eliminated, or to be replaced under the Contract by other access facilities, the existing access shall not be closed until the replacement access facilities are usable.

All fences, mailboxes, signs, etc. subject to interference shall be maintained by the owner until the work is completed, at which time they shall be restored to the condition existing prior to starting the work, or as shown on the improvement plans or specified by the General Manager.

Water or dust palliative shall be applied in accordance with Northern Sierra Air Quality Management District Rule 226.

In order to expedite the passage of public traffic through or around the work and where ordered by the District, the owner shall install signs, lights, flares, barricades, and other facilities for the sole convenience and direction of public traffic. Also, where directed by the District, the owner shall provide and station competent flag persons whose sole duties shall consist of directing the movement of public traffic through or around the work.

Flag persons and guards, while assigned to traffic control, shall perform their duties and shall be provided with the necessary equipment in accordance with the current "Instructions to Flagmen" of the State of California Department of Transportation. The equipment shall be furnished and kept clean and in good repair by the owner at their expense.

Safety

The owner shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to all applicable Federal, State, and local laws, ordinances, and codes, and to the rules and regulations established by the California Occupational Health and Safety Administration, and to other rules of law applicable to the work.

The services of the District in conducting construction review of the owner's performance is not intended to include review of the adequacy of the contractor's work methods, equipment, bracing or scaffolding or safety measures, in, on, or near the construction site, and shall not be construed as supervision of the actual construction nor make the District responsible for providing a safe place for the performance of work by the owner, subcontractors, or suppliers; or for access, visits, use work, travel or occupancy by any person.

The owner shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instruction as is necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to electrical work, work involving excavation and in pump sump work.

All work and materials shall be in strict accordance with all applicable State, Federal and local laws, rules, regulations, and codes.

All electrical equipment furnished shall be grounded and provided with guards and protections as required by safety codes. Where vapor-tight or explosion-proof electrical installation is required by law, this shall be provided.

Shoring and Trench Safety Plan – Attention is directed to Section 832 of the Civil Code or the State of California relating to lateral and subjacent support, and the owner shall comply with this law.

In accordance with Section 6705 of the State Labor Code, the owner shall have provisions for worker protection from caving ground. Trench safety working drawings shall show the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground. If such working drawings vary from the shoring system standards established by the Construction Safety Orders of the California Occupational Health and Safety Administration or the Federal Safety Standards of the Department of Health, Education and Welfare, improvement plans shall be prepared by a registered civil or structural engineer. In no event shall the owner use a shoring, sloping, or protective system less effective than that required by said Construction Safety Orders, or less effective than that required by said Federal Safety Standards.

Protection of Person and Property

The owner shall take whatever precautions are necessary to prevent damage to all existing improvements, including above-ground and underground utilities, trees, shrubbery that is not specifically shown to be removed, fences, signs, mailboxes, survey markers and monuments, buildings, structures, the District's property, adjacent property, and any other improvements or facilities within or adjacent to the work. If such improvements or property are injured or damaged by reason of the owner's operations, they shall be replaced or restored, at the owner's expense, to a condition at least as good as the condition they were in prior to the start of the owner's operations.

The owner shall adopt all practical means to minimize interference to traffic and public inconvenience, discomfort or damage. The owner shall protect against injury any pipes, conduits or other structures, crossing the trenching or encountered in the work and shall be responsible for any injury done to such pipes or structures, or damage to property resulting there from. They shall support or replace any such structures without delay and without any additional compensation to the entire satisfaction of the district. All obstructions to traffic shall be guarded by barriers illuminated at night. The owner shall be responsible for all damage to persons and property directly or indirectly caused by their operations and, under all circumstances, they must comply with the laws and regulations of the County and the State of California relative to safety of persons and property and the interruption of traffic and the convenience of the public within the respective jurisdictions.

The owner is cautioned that they must replace all improvements in rights-of-way and within the public streets to a condition that shall comply with all general paving requirements and special requirements of the Town of Truckee, Nevada County, Placer County, and the State of California Department of Transportation.

Type and time of construction required at any road subject to interference by Contract work will be determined by those authorities responsible for maintenance of said road. It shall be the responsibility of the owner to determine the nature and extent of all such requirements, including provision of temporary detours as required; however, the construction right-of-way obtained by the District at affected roadways will be adequate for provision of all required detours. As required at any road crossing, the owner shall provide all necessary flag persons, guardrails, barricades, signals, warning signs and lighting to provide for the safety of existing roads and detours. Immediately after the need for temporary detours ceases, or when directed, the owner shall remove such detours and perform all necessary cleanup work, including replacement of fences, and removal of pavement. Included shall be all necessary replacement of existing roadway appurtenances, grading work, soil stabilization and dust control measures, as required and directed. The cost of all work specified under this Section shall be borne by the owner.

If required by law, the owner shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the project, which are in any way affected by the excavations or other operations connected with the completing of the work under his/her contracts.

The owner shall examine all bridges, culverts, and other structures over which they will move their materials and equipment, and before using them, they shall properly strengthen such structures where necessary. The owner shall be responsible for any and all injury or damage to such structures caused by reason of their operations.

A-7.7 Guarantee and Delivery of Title

General Guarantee
The developer/owners shall supply the District with a guarantee for all materials and workmanship which is incorporated into the system for a time period that, at a minimum, extends from the date of acceptance of the facilities to the first day of October of the following year (see Section 2.01 Dedication of Sanitary Sewer Facilities, and Section 2.05, Extension of and/or Alterations to Sanitary Sewer Facilities). The time period for the guarantee may be extended by the General Manager on a case-by-case basis as needed. To assure the District this will be completed, the developer/owners shall supply this guarantee as requested by the District in either of the following two forms. Failure to provide this maintenance agreement or maintenance bond will cause the District to withhold final approval.

- Maintenance Bond – The developer/owners shall supply a maintenance bond for 10 percent of the contract amount for the sanitary sewer facilities as specified in the District Dedication Packet.

- Maintenance Agreement – The developer/owners shall supply a maintenance agreement, depositing 10 percent of the contract amount for sewer facilities, in cash securities as specified in the District Dedication Packet.

If a period of 48 hours has elapsed after the developer/owner and/or the bonding company have received written notice by certified mail that a condition of failure exists and no correction has been made, the bonds will be called or the securities withdrawn, and the work will be performed by the District and charged against them.

The developer shall be responsible for the full expense incidental to making good any and all of the above guarantees, the performance of which shall be binding upon the developer and his/her sureties.

Delivery of Title
Upon the completion and acceptance of the installations of the sewer facilities hereunder, the same shall be transferred to the District, without cost, and the owner shall provide and deliver to the District the following:

- Duly executed warranty bill of sale transferring marketable title to the District of all such sewer works, installations and appurtenances, title thereto to be free and clear of all liens and encumbrances and;

- Duly executed easements wherein said facilities and installations are located in favor of the District; which said bill of sale and easement shall be in form acceptable to the District.

A-7.8 Materials and Equipment

All materials, hardware, equipment, fittings and other miscellaneous items to be incorporated in the District sanitary sewer system shall conform to the following specification. No changes from the specified products shall be made without written approval from the General Manager. Coverage requirements for various pipeline materials is listed in Appendix A-6.

Samples and Tests
The General Manager may permit the use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificate of Compliance stating that the materials involved comply in all respects with the requirements of the specifications. The certificate shall be signed by the manufacturer of the material or the manufacturer of assembled materials. A Certificate of Compliance must be furnished with each lot of material delivered to the work and the lot so certified must be clearly identified in the certificate.

All materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that material is used on the basis of a Certificate of Compliance shall not relieve the contractor of responsibility of incorporating material in the work which conforms to the requirements of the improvement plans and specifications and any such material not conforming to such requirements will be subject to rejection whether in place or not.

The District reserves the right to refuse to permit the use of material on the basis of Certificate of Compliance.

At the option of the District, the source of supply of each of the materials shall be approved by the District before delivery is started and before such material is used in the work. Representative preliminary samples of the character and quality prescribed shall be submitted by

the contractor or producer of all materials to be used in the work for testing or examination as desired by the District.

All tests of materials furnished by the owner shall be made in accordance with commonly recognized standards of national organizations, and such special methods and tests as are prescribed in these specifications.

The owner shall furnish such samples of materials as are requested by the District, without charge. Samples will be secured and tested whenever necessary to determine the quality of material.

The owner shall deliver to the District two copies of certificates from the manufacturers of all materials and appurtenances incorporated in the District sanitary sewer system. These certificates shall certify that all goods manufactured by the manufacturer meet all applicable codes, District requirements and specifications.

The certificate shall show the type and quality of materials delivered, the requirements and/or specifications that are complied with.

Should the owner fail to secure the certificates as required he shall at his/her expense have a commercial testing laboratory, approved by the General Manager, perform the necessary testing and deliver two copies of the results to the General Manager.

Representative preliminary samples of the character and quality prescribed shall be submitted by the owner or producer of all materials to be used in the work for examination as desired by the General Manager.

No material shall be used until it has been approved by the General Manager.

The District reserves the right to take any additional samples or make additional tests as they may deem necessary.

Polyvinyl Chloride Pipe (PVC) Gravity Sewer Pipe

PVC gravity sewer pipe and fittings shall conform to ASTM D 3034 for diameters from 4" to 15", and ASTM F 679 for 18" to 24", with integral-bell gasket joints. Rubber gaskets shall be factory installed and conform to ASTM F 477. Pipe joints shall conform to ASTM D 3212.

Pipe shall be made of PVC plastic having a cell classification of 12454-B or 12364-B as defined in ASTM D 1784 and shall have SDR of 35 or 26 and minimum pipe stiffness of 46 PSI according to ASTM D 2412. Pipe shall be installed in compliance with ASTM D 2321. Bedding material shall provide adequate and uniform support under pipe.

Pipe size and dimensions shall be submitted to the General Manager for approval prior to contractor's purchase.

- Size and Dimensions – Size and dimensions shall be such that the minimum "pipe stiffness" (F/Y) at 5 percent deflection shall be as specified in ASTM D 3034-72 for all sizes when calculated in accordance with ASTM designation D-2412, External Loading Properties of Plastic Pipe by Parallel-Plate Loading.

- Flattening - The flattening test shall comply with the requirements of ASTM D 3034-72.

- Extrusion Quality - The extrusion quality shall comply with the requirements of ASTM D 3034-72.

- Impact Resistance - The resistance shall comply with the requirements of ASTM D 3034.

Nominal Pipe Size-Inches	Impact Strength Ft. – Lbs.
4	150
6	210
8	210
10	220
12	220
*	

*For larger diameter pipe, see ASTM Standards

- Markings – Markings shall comply with the requirements of ASTM

PVC Pressure Pipe (PVC C900 & C905)
PVC C900 & C905 pipe shall conform to and meet the requirements of AWWA C900 and C905, respectively. Compound material shall meet ASTM D1784, cell class 12434-B. Pipe shall be supplied with an integral bell with gasket meeting the requirements of ASTM F 477. The gasket joint assembly shall meet the requirements of ASTM D 3139.

High Density Polyethylene Pipe (HDPE)
HDPE pipe shall be high molecular weight, high density polyethylene pipe. The material shall be listed by the Plastic Pipe Institute (PPI) with a designation of PE 3408 and have a minimum cell classification of 345434C, D, or E (inner wall shall be light in color) as described in ASTM D3350. The pipe material shall meet the requirements for Type III, Class B or C, Category 5, Grade P34 material as described in ASTM D1248. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe. Pipe (excluding black colored pipe) stored outside shall not be recycled. Pipe and fittings shall be made in conformance with ASTM F714 and ASTM D3261 as modified for the specified material. The pipe shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions or other injurious defects. It shall be uniform in density and other physical properties. Any pipe not meeting these criteria shall be rejected.

Ductile Iron Pipe
Ductile iron pipe shall conform to and meet the requirements of ANSI/AWWA C151/A21.51. It shall be the thickness class required for supporting the imposed loads. Joints shall conform to ANSI/AWWA C111/A21.11.

Push-on gasket joints and fittings may be used except where otherwise prohibited by the District.

Fittings shall be ductile iron and shall meet the requirements of ANSI/AWWA C110/A21.11. An exception to this is the 4 to 12 inch pipe size whereby ductile iron compact fittings may be used provided they meet the requirements of ANSI/AWWA C153/A21.53 and have a working pressure rating of 350 pounds per square inch.

Ductile iron gravity pipe used for single family residences shall be class 51 or heavier and may use "Calder" type couplings with stainless steel clamps.

All Ductile iron shall be provided with a factory installed interior coating to prevent corrosion from sewer. Protecto 401 or a District approved coating.

Conductor Casing Pipe
Conductor casing pipes shall conform to County/Town and State requirements and these specifications.

Pipe used as a conductor casing pipe shall be welded steel pipe. The protective lining and coating, if required by the General Manager shall be as shown on the improvement plans.

- **Welded Steel Pipe** shall be manufactured of steel meeting the requirements of ASTM Designation A245, Commercial Grade. The method by which the pipe is manufactured shall comply with one or more of ASTM specifications: A134, A135, A139 or A211.

- The pipe shall be welded by either the electric-resistance or electric-fusion process, with either spiral seam welded joint or straight seam welded. All end joints shall be butt welded.

- When the conductor case is to be installed by boring and jacking, the wall thickness shall be 1/4 inch for sizes up to and including 24 inches in diameter, and 5/16 inch for sizes 27 inches to 36 inches in diameter.

Castings
All castings for manhole rings and covers, or other purposes, shall be tough grey iron, free from cracks, holes, swells and cold sheets and be of workmanlike finish, and shall conform to the pertinent Standard Drawing. The cast iron shall meet the requirements of Specification ASTM Designation A48, Class 40. The quality shall be such that a blow from a hammer will produce an indentation on a rectangular edge of the castings, without flaking the metal. Before leaving the foundry, all castings shall be thoroughly cleaned.

Manhole covers shall fit tightly to form a watertight seal and shall seat in the frame and shall not rock. All manhole covers which do not fit neatly and bear firmly in the frame will be rejected.

Manhole frame and covers shall be used to protect end of line cleanouts located in paved areas. Manhole covers shall fit tightly to form a watertight seal and shall seat in the frame and shall not rock. The frame and cover shall be set on a concrete footing ring of at least 12 inches wide by 12 inches thick.

Precast Manhole Sections
The manhole sections, adjustment rings and tapered sections with tongue and groove joints shall conform to ASTM Designation C478, except that cement and aggregate shall conform to the requirements of Structural Concrete, Section A-7.14, of the Standard Specifications. Concrete for poured portions of manholes shall conform to Structural Concrete, Section A-7.14, of the Standard Specifications. Joints shall conform to Installation of Sanitary Sewer Facilities, Section A-7.9, of the Standard Specifications under "Manholes." Manhole cones shall be constructed with an internal flat vertical surface at the upper joint to allow installation of internal manhole

chimney seals. Vertical surface shall measure no less than 2-inches and be continuous along the entire circumference of the top cone opening. Metal forms shall be used in the manufacture of the precast sections so as to obtain smooth surfaces. The concrete shall be well compacted by being centrifugally-spun, vibrated, or mechanically-tamped.

Cast in Place Manhole Bases

Cast-in-place concrete for manholes or portions of manholes shall conform to the Standard Specifications and ASTM Specification C478-64T. Portland Cement shall be Type II, conforming to the requirements of ASTM Designation C-150.

Backfill Material

Backfill material as indicated in the Standard Drawings shall meet the following specifications:

Class I Backfill

Sieve Sizes	Percentage Passing Sieves
1/2"	100
No. 4	35-100
No. 50	10-40
No. 100	3-20
Minimum Sand Equivalent	20
Minimum Durability	40

Class 2 Backfill

Sieve Sizes	Percentage Passing Sieves
1"	100
3/4"	90-100
No. 4	35-60
No. 30	10-30
No. 200	2-9
Minimum Sand Equivalent	20
Minimum Bulk Specific Gravity	2.5

Class 3 Native Backfill

Sieve Sizes	Percentage Passing Sieves
3"	100
Minimum Sand Equivalent	20

Class 4 Backfill

Sieve Size	Percentage Passing Sieves
1"	90-100
3/4"	70-100
1/2"	25-60
3/8"	10-40
#4	0-10
#8	0-5
Minimum Bulk Specific Gravity	2.5

Slurry Cement Backfill

Slurry cement backfill shall consist of a fluid, workable mixture of aggregate, cement, and water. When slurry cement backfill is used for structure backfill, the width of the excavation may be reduced so that the clear distance between the outside of the pipe and the side of the excavation on each side of the pipe is a minimum of 6 inches. Cement shall be Portland Cement. Water used for slurry cement backfill shall be free from oil, salts, and other impurities which would have an adverse effect on the quality of the backfill material. Aggregate shall be free of organic material and other deleterious substances and shall meet the following grading:

Sieve Size	Percentage Passing Sieves
1 ½"	100
1"	80-100
3/4"	60-100
3/8"	50-100
#4	40-80
#100	10-40

The aggregate, cement, and water shall be proportioned either by weight or by volume. Not less than 188 pounds of cement (2-sack) shall be used for each cubic yard of material produced. The water content shall be sufficient to produce a fluid, workable mix that will flow and can be pumped without segregation of the aggregate while being placed. Materials for slurry cement backfill shall be thoroughly machine-mixed until the cement and water are thoroughly dispersed throughout the material. Slurry cement backfill shall be placed in the work within one hour after mixing.

Slurry cement backfill shall be placed in a uniform manner that will prevent voids in, or segregation of, the backfill, and will not float or shift the pipe. Backfilling over or placing any material over slurry cement backfill shall not commence until 4 hours after the slurry cement backfill has been placed, except when concrete sand is used for the aggregate and the in-place material is free draining, backfilling may commence as soon as the surface water is gone.

Backfill tests shall be made in conformance with the requirements set forth in these specifications:

Tests	Test method No. California or ASTM
Relative Compaction	ASTM D1556, D1557, & D2922
Sand Equivalent	ASTM D2419 / 217
Resistance (R-Value)	ASTM D2844 / 301
Sieve Analysis	ASTM C136 / 202
Durability	ASTM D3744
Bulk Specific Gravity	ASTM C127

Pump Stations
(For private residential submersible pump stations see Residential/Small Commercial Pump Systems, Section 7.16). Pump stations shall have a duplex pump configuration with controls designed to alternate pumps. Controls shall include Hand-Off-Auto switches and running lights for each pump. Pump electrical supply shall be single phase for pumps rated at 5 horsepower or less where possible. Pumps shall be sized for the ultimate design flow of the area being serviced by the station and with a minimum of 4 feet per second flow velocity in the force main.

Submersible Pump Stations
Submersible pumps shall be of the explosion proof type. If circumstances require, the pump shall incorporate a grinder or cutter type blade/impeller system. Pump design shall be of the Flygt rail and discharge base mount type or District approved equal. Lifting chains shall be stainless steel and rated for the lifting requirements provided by the pump manufacturer. Each pump discharge pipeline shall include a swing check valve with external lever and weight and an eccentric plug valve before the two discharge pipelines join. Valves shall be located in a separate vault outside of the wet well where possible. External valve vaults shall have a valve drain pipeline plumbed into the wet well. The drain pipeline valve shall be accessible by means of a riser pipe boxed to grade between the vault and the wet well, see Standard Drawings, Figure 20, Submersible Pump Station (section view), and Figure 21, Submersible Pump Station (plan view). Wet well piping and fittings shall be flanged ductile iron only unless approved by General Manager. Submersible pump controllers shall be of a type equal in design and manufacture to preferred current District submersible controllers. All site related issues shall be in accordance with Pump Station Structures, Section A-7.15. All electrical and telemetry equipment shall be in accordance with Pump Station Electrical Work, Section A-7.16.

Drywell Centrifugal Wastewater Pumps
Centrifugal pumps shall be of the vertical or horizontal close-coupled, self-priming centrifugal type specifically designed for the handling of raw, unscreened sanitary domestic wastewater. Each pump shall be of heavy, cast iron construction and shall include a motor with the pump impeller mounted directly on the one-piece motor-pump shaft.

Each pump at its rated speed shall be designed to retain adequate liquid in the pump casing to insure unattended automatic re-priming in a complete open system without suction of discharge check valves and with a dry suction leg. Upon completion of re-priming cycle, pumps shall deliver full rated capacity at rated Total Dynamic Head (TDH) at the designed total dynamic suction lift.

The openings and passages of the pump shall be large enough to permit the passage of a sphere 3 inches in diameter and any trash or stringy material which can pass through the average 4 inch building collection system. The pump must be equipped with a removable cover plate or rotating assembly allowing complete access to pump interior to permit service and repairs without disturbing suction or discharge piping. The pump volute casing shall contain no openings of a lesser diameter than the sphere size specified. Screens or any internal devices that create a maintenance nuisance or interfere with priming and performance of the pump will not be permitted.

The pump shaft shall be sealed against leakage by a double mechanical seal, installed in a bronze seal housing constructed in two sections with registered fit. Both the stationary sealing member and mated rotating member shall be of Tungsten-Titanium carbide alloy.

The impeller shall be two-vane, semi-open or enclosed type, non-clog, cast in ductile iron, and shall be balanced. The impeller shall be keyed and secured to the motor-pump shaft by a stainless steel device. The impeller shall not be screwed or pinned to the motor-pump shaft and shall be readily removable without the use of special tools. To prevent the buildup of stringy materials, grit and other foreign particles around the pump shaft, all impellers less than full diameter shall be trimmed inside the impeller shroud. The shroud shall remain full diameter so that close, minimum clearance from shroud to volute is maintained.

The seal system lubricant shall be taken from the pump discharge through a 40 micron or better filter. The filter shall be readily accessible for cleaning and maintenance. The filter shall be isolated with brass valves. The seal system shall contain a brass valve connected near the top of the seal housing to permit the relief of any air trapped in the seal unit. A manually operated brass valve shall also be provided to vent the pump volute.

The pump volute shall be of heavy, cast iron construction, free from projections that might cause clogging or interfere with flow through the pump.

The pump shall be supported by a heavy, cast iron base with four legs to provide maximum rigidity and balance. The height of a vertical pump base shall be sufficient to permit the use of an increasing suction elbow which shall be provided when the nominal pump size is smaller than the suction line. The suction and discharge openings shall be flanged, faced and drilled 125-pound American Standard.

Upon request, manufacturer must submit to the District for their evaluation and approval, a list of self-priming wastewater pump installations reflecting of satisfactory, automatic operations while permanently installed in an unattended wastewater lift stations.

Workmanship and materials throughout shall be of highest quality.

Pump Motors

The motors shall be designed for continuous operation at full load with a temperature rise of not more than 40 degrees centigrade above ambient temperature. Motors shall be capable of frequent starts each hour as required to meet the flow requirements without overheating. Motors shall also be rated for the altitude at which they are to be installed.

A-7.9 Installation of Sanitary Sewer Facilities

Excavation and Bedding
Unless otherwise specified, the excavation for sewer pipe shall be an open trench, excavated to six inches below the flow line grade shown on the improvement plans, or 1 inch below the outside diameter of the bell, whichever is greater. The native soil in the trench bottom shall be compacted to 90 percent relative compaction before placement of bedding in the pipe zone. Pipe zone bedding material shall be compacted to a relative compaction as specified in the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16, or 17.

Pipe trenches shall not be left open farther than 300 feet in advance of pipe laying operations or 200 feet to the rear thereof, unless otherwise permitted by the General Manager.

All trench excavation within asphalt paved areas shall be saw cut in neat parallel lines to the limits of excavation. When the existing pavement is concrete, it shall be sawed to a neat line 6 inches wider on each side than the trench width.

Whenever the bottom of the trench is soft, yielding, or unsuitable as a foundation for the pipe, sufficient crushed rock or coarse clean gravel shall be rammed into the soft material. If such treatment does not provide a proper foundation, the unsuitable material shall be removed to a depth such that when replaced with bedding material, it will provide a stable foundation.

Whenever the trench bottom is in rocky material, the trench shall be excavated to 6 inches below the low line shown on the improvement plans or 3 inches below the outside diameter of the bell, whichever is greater, and backfilled to grade with imported bedding material thoroughly compacted into place.;

Water stop impervious plugs (trench cutoff blocks) shall be installed in trenches where Class 4 Backfill is used, in all areas of ground water movement, and in all trenches containing pipeline slopes of 10 percent or greater.

The location and spacing of trench cut-off blocks for private building laterals shall be the responsibility of and shall be determined by the owner. The location and spacing of trench cut-off blocks for sanitary sewer mains shall be determined by the General Manager. Trench cut-off blocks shall be constructed as shown in the Standard Drawings, Trench Cut-Off Blocks, Figure 18.

Bracing and Shoring
Sufficient bracing and shoring shall be installed in trenches to insure the safety of workers, and to protect and facilitate the work. Where practicable, all such bracing and shoring shall be removed from the trench as the backfilling proceeds. All bracing and shoring shall comply with current Construction Safety Orders of the California Occupational Health and Safety Administration.

When shoring is used in the trench, the fill shall be carried to a height sufficient to prevent the surrounding ground from cracking or caving into the trench before the shoring is removed.

Pipeline Installation
A minimum of 30 inches compacted earth fill shall cover all gravity and force main pipelines. Cover less than 48 inches in vehicular traveled ways requires heavier walled pipe as listed in Appendix A-6.

The pipe shall be laid in conformity to the prescribed line and grade. The prescribed grade shall be set using the appropriate surveying tools (i.e., transit, rod, laser, etc.). In case any discrepancy exists from the prescribed alignment, the work shall be stopped and the discrepancy immediately corrected. In addition, a string line shall be used in the bottom of the trench to insure a straight alignment of pipe between manholes, unless curved alignment is shown on the improvement plans.

Pipe shall be laid continuously upgrade with the bell of the pipe uphill. Each length of pipe shall be laid on a firm bed and shall have a true bearing for the entire length between bell holes. No wedging or blocking up of the pipe will be permitted.

Both bell and spigot shall be clean before the joint is made and care shall be taken that nothing but the joint-making material enters the joints.

When for any reason, pipe laying is discontinued for an hour or more, the open end of all pipelines shall be closed with a close-fitting stopper.

Joining pipes shall be made by approved methods and recommendations of the manufacturer, care being used to prevent chipping or cracking of either end of the pipe during installation.

Pipe shall be protected during handling against impact shock and free fall. The rubber gasket joints shall be cleaned prior to the seating of the gasket. The gasket shall be wiped clean and shall be fitted snugly in the gasket seat. A thin film of lubricant shall be applied to the inside surface of the gasket which will come in contact with the plain end of the pipe. If necessary, apply the same lubricant to the plain end of the pipe. Use only a lubricant recommended by the pipe manufacturer.

Boring or Jacked Casing
The work contemplated under this heading consists of placing cast iron pipe or other pipe of approved material, usually in a conductor casing pipe, under a paved roadway, street or railroad to a true line and grade as shown on the improvement plans, by means of boring or jacking operations. The equipment and method of operation shall be approved by the General Manager before proceeding with the work.

The excavation for the boring operation shall be kept to a minimum, but shall be of sufficient dimensions to satisfactorily complete the work. If so required, bracing and shoring shall be provided to adequately protect the workmen and the roadway or railroad.

The conductor casing pipe shall be placed closely behind and in conjunction with the boring operation. The bored hole shall be not more than 0.1 foot in diameter larger than the conductor casing pipe. Guide rails shall be accurately set to line and grade so as to achieve close adherence to the line and grade shown on the improvement plans.

The pipe to be placed inside the conductor casing pipe shall have a non-rigid joint and shall be installed by the use of suitable wood skids or approved casing spacers. Clean sand shall then be

sluiced or blown into the conductor casing pipe to a depth of not less than half the diameter of the sewer pipe.

Where tunneling is permitted, backfill shall be made with clean damp sand, tamped and compacted to insure a non-yielding, uniform foundation for the entire length of the tunnel.

A boot shall be placed at both ends of the casing pipe to prevent the passage of water through the annular space between casing pipe and sewer pipe.

Trench Backfill Gravity Pipelines

Backfill around and to at least 1 foot over pipe (pipe zone), shall be made with either Class 1 or Class 2 Backfill material compacted as placed. A difference in level on either side of the pipe not to exceed 4 inches shall be maintained to hold the pipe firmly in place.

Backfill from a point at least 1 foot over the top of the pipe to finish grade shall be made with Class 2 or Class 3 Backfill. When the sewer trench lies within the paved right-of-way of an existing street this backfill shall be Class 2. Class 3 Backfill may be used in areas outside the pavement of streets and highways involved. The General Manager shall have discretion on selection of backfill materials that vary from those outline herein based on site specific conditions.

Backfill shall not be placed until the pipe or other facility has been inspected by an authorized District Representative and approved for backfilling.

Material for Class 1, Class 2, Class 3, and Class 4 Backfill shall be placed in uniform horizontal layers not exceeding 0.67 foot in thickness before compaction, and shall be brought up uniformly on all sides of the trench. Backfill compaction beneath the pipe must be achieved prior to placing pipe in trench. If the contractor can satisfactorily demonstrate to the General Manager an alternative method of placing the backfill so that all requirements, other than the layer thickness, are met, the General Manager will permit the contractor to use the alternative method. Under no circumstance will the contractor use the alternative method unless the **General Manager's approval is obtained in writing.**

Each layer of backfill shall be compacted to a relative compaction as indicated in the Standard Drawings, Typical Sewer Trench, Figures 14, 15, 16, or 17.

The District reserves the right to perform compaction tests, or have compaction tests performed through a licensed geotechnical testing firm, to verify compaction of the backfilled trench section. All tests by the District will be performed in such a manner as will not unnecessarily delay the work. The owner shall not be required to reimburse the District for the initial tests performed. If subsequent tests are required due to compaction failures, the owner shall pay for all subsequent compaction tests.

The use of backfill material other than Class 1, Class 2, and Class 3 is not permitted unless approval is granted, in writing, from the General Manager.

Class 4 Backfill material may be used in the pipe zone, if approved by the General Manager or their designated representative in writing, under the following conditions:

- When large amounts of groundwater are encountered within the trench section, or;

- When trench depths exceed 12 feet in depth and placement of Class 1 Backfill material at the prescribed relative compaction is not possible.

If Class 4 Backfill material is used in the pipe zone, Mirifi 140 NC filter fabric, or equivalent, must be placed on the sides and top of the Class 4 Backfill before proceeding with additional approved backfill. A minimum of three trench blocks must be installed between manholes at equal intervals when Class 4 material is used.

Groundwater may not be removed from the trench and placed in the existing sanitary sewer. Other disposal techniques for dewatering must be used.

Initial backfill shall be to 0.7 of the vertical outside diameter of the pipe in 8 inch maximum lifts.

Backfill material shall be "shovel sliced" on both sides of the pipe, with care to assure that the spaces under the pipe haunches have been filled.

Field repairs to PVC pipe are not acceptable unless the General Manager has given his/her prior approval for each repair.

Mechanical compactors shall not be used directly over the pipe with less than 1 foot of cover.

Paving over trenches shall not be placed until the backfill has been inspected by an authorized District representative. Trench surfacing and trench restoration in Nevada/Placer County, Town of Truckee, or State of California right-of-way shall conform to the requirements of the agency having jurisdiction.

Backfill around manholes, grease interceptors, sand/oil interceptors, and pits excavated for boring operations shall be made in the same manner as above specified for trenches, except as otherwise provided under Manholes.

If, at any time during the period of responsibility, there shall be any settlement of the trenches, cracking of the newly applied pavement, or separation of the newly applied pavement from the existing pavement requiring repairs to be made in any street highway, or easement, or should any other defect appear in the system due to the contractor's operations, the owner shall promptly repair all defects in accordance with the requirements of the responsible agency.

Trench Backfill Force Mains

Trench backfill methods and materials for force mains, shall be as specified for gravity sewer pipelines with the following exceptions:

- The height of backfill over the pipe before testing shall not be less than 12 inches.

- At all changes of direction and at valves, the force main shall be restrained from movement by the use of thrust blocks or restrained joints.

- A plan describing the proposed use of restrained joints and/or thrust blocks must be approved by the District prior to any force main installation.

- All restrained joints and/or thrust blocks shall be in place before the pipeline is hydrostatically tested.

- All joints, bends, angels, or fittings shall be left exposed until testing has been completed.

Every precaution shall be taken against floating the pipe. In case of such floating, the contractor shall replace the pipe to its proper location at his/her own expense, and replace any damaged pipe which may have resulted.

Trench Section, Within New Roads
Sewer pipelines installed within new roads shall be bedded on 6 inches of Class 1 or Class 2 Backfill compacted to 95 percent relative compaction. Class 1 or Class 2 Backfill shall also extend a minimum 12 inches above top of pipe, compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (paved – new road construction), Figure 14. In the event that significant groundwater is encountered in the excavated trench, Class 4 Backfill may be substituted for Class 1 or 2 Backfill as outlined above. A minimum of three trench cut-off blocks must be placed in the trench if Class 4 Backfill is used.

Class 3 native backfill shall be placed from 12 inches above top of pipe to road sub grade. All Class 3 Backfill shall be compacted to 90 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (paved – new road construction), Figure 14.

Trench Section, Existing Paved Areas
Sewer pipelines installed within existing paved areas shall be bedded on 6 inches of Class 1 or Class 2 Backfill compacted to 95 percent relative compaction. Class 1 or Class 2 Backfill shall also extend a minimum 12 inches above top of pipe, compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (paved – existing roadway), Figure 15. In the event that heavy groundwater is encountered in the excavated trench, Class 4 Backfill may be substituted for Class 1 or 2 Backfill as outlined above. A minimum of three trench cut-off blocks must be placed in the trench if Class 4 backfill is used.

Class 2 Backfill shall be placed from 12 inches above top of pipe to 1 inch below bottom of existing asphalt pavement. All Class 2 Backfill shall be compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (paved – existing roadway), Figure 15.

Trench Section, Roadway Shoulders adjacent to Paved Areas
Sewer pipelines installed on roadway shoulders adjacent to paved areas shall be bedded on 6 inches of Class 1 or Class 2 Backfill compacted to 95 percent relative compaction. Class 1 or Class 2 Backfill shall also extend a minimum 12 inches above top of pipe, compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (off shoulder), Figure 16. In the event that heavy groundwater is encountered in the excavated trench, Class 4 Backfill may be substituted for Class 1 or 2 Backfill as outlined above.

Class 2 Backfill shall be placed from 12 inches above top of pipe to finished grade. Class 2 Backfill placed from 12 inches above top of pipe to 12 inches below finished grade shall be compacted to 90 percent relative compaction, with Class 2 Backfill placed from 12 inches below finished grade to finished grade compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (off shoulder), Figure 16.

Class 3 Backfill may be substituted for Class 2 Backfill up to one foot below finished grade. Class 3 Backfill shall be compacted to 90 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (off shoulder), Figure 16.

Trench Section, Unpaved Areas

Sewer pipelines installed in unpaved areas shall be bedded on 6 inches of Class 1 or Class 2 Backfill compacted to 95 percent relative compaction. Class 1 or Class 2 material shall also extend a minimum 12 inches above top of pipe, compacted to 95 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (non-traffic areas), Figure 17. In the event that heavy groundwater is encountered in the excavated trench, Class 4 Backfill may be substituted for Class 1 or 2 Backfill as outlined above.

Class 2 or Class 3 Native Backfill shall be placed from 12 inches above top of pipe to finished grade. Class 2 or Class 3 Native Backfill shall be compacted to 90 percent relative compaction as specified in the Standard Drawings, Typical Sewer Trench (non-traffic areas), Figure 17).

Manhole Installation

Manholes shall be watertight structures constructed in accordance with the details shown on the improvement plans as specified herein and as directed by the General Manager. Precast manholes shall be constructed of precast reinforced pipe sections, tapered reinforced concrete sections, adjustment rings, with cast-in-place bases in accordance with the Standard Specifications and ASTM Specifications C478-64T. Portland Cement shall be Type II, conforming to the requirements of ASTM Designation C-150.

Precast manhole bases shall be used in lieu of cast in place manhole bases except where required to connect to existing pipelines. All manhole cones shall be undamaged and of the concentric type unless otherwise requested by the District. A minimum of 28 inches of straight trough shall be provided immediately upstream of the outlet pipe penetration to facilitate the entry of District television equipment.

The ends of pipe (barrel sections, tapered sections, adjustment rings) shall be undamaged and of such design and construction that when properly laid they shall have a smooth and uniform surface. Each joint shall be sealed with Ram-Nek sealant and primer to prevent infiltration to exfiltration. Ram-Nek shall be neatly trimmed after manhole assembly.

No pipe shall project more than 0.17 foot into a manhole and in no case shall the bell of a pipe be built into the wall of a manhole or structure. All work shall be cured for a period of 10 days after being placed and shall be protected from injury.

Manholes shall be situated such that surface runoff is not directed to and does not pool over the frame and cover. Adequate drainage shall be provided to direct surface runoff away from the manhole cover.

Manholes in paved areas shall have at least one, 2-inch grade ring installed on top of the cone section. The manhole frame and cover shall be placed on top of the grade ring as prescribed herein. The throat of the manholes shall be made of precast concrete grade rings of the proper inside diameter and height. If fine adjustments are needed a concrete mixture fortified with "Xypex Xycrilic Admix" or equal may be used. The maximum depth permitted shall be 12 inches between the cone and frame. Adjustments using concrete mix shall not exceed 2 inches.

When adjusting an existing manhole to grade and the total depth of the throat from the top of the frame to the bottom of the throat exceeds 24 inches, the upper portion of the manhole shall be removed and the manhole shall then be reconstructed so that the final adjusted height of the throat is not greater than 12 inches. The manhole shall then be tested in accordance with Section A-7.10, Testing of Sanitary Sewer Facilities.

Before any work is started on adjusting or repairing a manhole, the channels in the base shall be covered. This cover shall be kept in place during all work. Upon completion of the work, the cover shall be removed from the manhole allowing no debris to fall or remain in the manhole.

The inside base of manholes shall be shaped to provide channels conforming to the size and shape of the crown of the inlets and outlets. The exact configuration of transition from branch size to mainline sizes shall be as directed by the General Manager.

Cast-in-place concrete for manholes or portions of manholes shall conform to the Standard Specifications and ASTM Specification C478-64T. Portland Cement shall be Type II, conforming to the requirements of ASTM Designation C-150.

The top of manhole elevations shown on the improvement plans are approximate only. In general, the finished grade of the manhole shall be set a maximum of 0.1 foot below the existing ground. Finished grade in paved areas should meet the appropriate Nevada/Placer County, Town of Truckee, or State of California specifications.

Whenever the excavation for a manhole exceeds the outside diameter of the manhole by 10 inches, measured along a radius line, the backfill shall be placed in layers not to exceed 8 inches uniformly around the structure and mechanically tamped to relative compaction of not less than 95 percent for each layer.

Manhole Frame and Cover

Cast iron frames and covers as specified shall be furnished and installed by the contractor in accordance with the applicable portions of the Standard Specifications, except as herein modified. Cast iron frames and covers shall be matched and marked in pairs before delivery to the work. Manhole covers shall fit into their respective frames to form a watertight seal and shall seat in the frame without rocking.

Bolt down type manhole frames and covers may be required at the request of the District within easements or other areas deemed necessary. If required, bolts shall be stainless steel with an anti-seize compound applied to all male threads. Miscellaneous iron and steel for use in the construction of manholes shall be furnished and installed in accordance with the details shown on the improvement plans.

Internal Chimney Seals

Manholes, grease interceptors, or sand/oil interceptors in paved areas, shall have an internal rubber seal installed. A rubber seal extension to include any additional heights of chimney not covered by the seal itself, shall be used as directed. The internal rubber seal and seal extensions shall be as manufactured by Cretex Specialty Products, or approved equal. The seals and extensions shall have a minimum thickness of 3/16 inches and shall be extruded from a high grade rubber compound conforming to the applicable requirements of ASTM C923. The bands used for compressing the seal and extension against the manhole shall be fabricated from 16

gauge stainless steel conforming to ASTM A240 type 304. Any screws bolts or nuts used on this band shall be stainless steel conforming to ASTM F593, type 304.

External Manhole/Vault Seals
When manholes are located within an area of high groundwater, adjacent to a lake or stream, or within an area of standing water, the exterior manhole joints and surface shall be sealed with an external concrete sealant. Exterior manhole walls shall be sealed with a liquid cold-applied waterproofing membrane system such Sonneborn® HLM 5000®, or equivalent. Exterior joints shall be sealed with an elastomeric based external concrete joint wrap such as Henry RUB'R-NEK®, or equivalent.

Manhole Temporary Construction Cover
Temporary covers of 3/8 inch steel plate of sufficient size to adequately cover the opening shall be placed on the cone of a manhole until paving is completed. Steel plate shall be attached to the cone with a removable watertight seal. Suitable locating rubs shall be welded to the underside of the cover to hold it in place during the grading and paving operations.

Manhole Markers
Manholes located in easements or unpaved areas shall be marked with a composite, flexible utility marker. Marker shall have a minimum width of 3 1/2 inches and a minimum length of 66 inches. Cross section design shall be such that the marker is able to remain erect in moderate wind conditions, yet flex without breaking if the top is bent over parallel to the ground. Marker shall be green or white in color with a lettered decal designating "sewer" or "sewer manhole" as appropriate.

Connection to Existing Manhole
Connections to existing manhole walls shall be made by core drilling into the wall of the manhole. Pipe penetration through the manhole wall shall be sealed with a watertight seal by one of the following:

- Equipping the pipe with a flexible pipe-to-manhole connector (Kor-N-Seal®, or equivalent) that provides a watertight seal of the pipe to the manhole. The rubber for the connector shall comply with ASTM 923 and consist of elastomers designed to be resistant to ozone, weather elements, chemicals, including acid, alkalis, animal and vegetable fats, oils, and petroleum products from spills. Stainless steel elements of the connector shall be non-magnetic series 316 stainless steel.

- Alternative mechanical seals require prior District approval.

- If either of the above pipe to manhole connectors cannot be used due to constraining field conditions, the following application will be allowed on a case-by-case basis: inserting the end of the pipe through the core drilled opening, and either using a manufactured water stop around the pipe centered in the penetration or packing the opening around the pipe with Ram-Nek and primer, then covering with a stiff mix of cement mortar, thoroughly compacted. The mortar shall be composed of one part Type II Portland Cement and three parts clean sand. The mortar shall be troweled smooth and flush with the interior surface of the manhole.

Core drill shall be located away from the precast manhole seam at a distance where the structure's integrity is not compromised with the installation of the seal.

Connection of a pipeline to an existing manhole, which has a stub-out, shall be accomplished with a rigid repair coupling. No flexible rubber couplings are allowed.

The use of impact hammers to break into a manhole wall is prohibited.

Drop Manholes
When in the opinion of the General Manager the flow line grades are such as to require a drop bowl and hood manhole, this shall be accomplished as detailed in the District Standard details. A drop inlet shall not be permitted within 5 feet of the flow line. Drop inlets shall utilize a Drop Bowl by Reliner, or approved equal.

Utility Pad Installation
See Standard Drawings, Utility Pad Installation, Figure 11.

Cleanouts
A cleanout shall be installed in each building lateral at the property line of the premises being provided with sewer service and within 5 feet of where the lateral exits the structure foundation. Cleanouts located under the house are not accepted; rather, the cleanout must be located *outside* the building foundation. Additional cleanouts shall be installed at intervals not to exceed 100 feet, and at any other point the owner may select for the purpose of keeping said sewer pipeline clean and free of obstruction. A cleanout, boxed to grade, shall also be installed at the property line on vacant parcels, and on the upstream side of the fitting at all 45 degree or greater bends.

All cleanout boxes shall be constructed of steel reinforced concrete with cast iron lids. Reinforced plastic cleanout boxes are not acceptable. Cleanout boxes shall be set to grade and backfilled to prevent accidental displacement or removal. Lids shall have "SEWER" or equivalent imprinted on the lids. Lids with verbiage other than a sewer utility designation (i.e., Water, Gas, etc.) imprinted on the lid are not permitted. See Standard Drawings, Lateral Cleanout Assembly, Figure 10.

All cleanout risers must be from 3 to 8 inches below finished grade and boxed to finished grade with an appropriate removable watertight plug in the end of the riser. Cleanout risers and appropriate boxes are required at the property line cleanout and at the cleanout installed nearest the building.

Two-way cleanouts shall be connected by a single straight pipe section with no additional fittings installed.

Dual swing ties are required for all stub outs and cleanout risers. Permanent objects such as property corners, power poles, water boxes, structures, etc. shall be used for swing ties.

Building Laterals
Building lateral pipelines connecting to the District's sanitary sewer system shall meet the requirements listed below and the criteria listed in Appendix A-6, and Appendix A-7.

- **Residential Building Laterals:** The diameter of gravity building laterals shall not be less than the pipeline diameter exiting the structure, nor less than 4 inches for a single residence or two residences. Six-inch diameter pipeline or larger shall be used for more than two dwelling units.

- **Commercial Building Laterals:** The minimum pipeline diameter for commercial gravity building laterals shall not be less than 6 inches.

Appropriate fittings shall be used in connecting to the service connection provided by the District. On double sewer services, both wyes shall be uncovered prior to connection to the system for District inspection and the appropriate wye shall be used.

Joints in all building laterals shall be of a collar type as recommended by the manufacturer and shall pass the District's inspection and required tests.

Building laterals are required to have a tracer wire installed adjacent to the sewer pipe. The tracer wire shall be insulated 10 gage copper wire and shall run the entire length of the building lateral, terminating in the cleanout boxes at the property line and adjacent to the building foundation.

Backflow Prevention Devices
Private and commercial building laterals are subject to the provisions of the California Plumbing Code, Sections 710.0 and 710.1. Drainage piping serving fixtures that are installed on a floor level that is located below the elevation of the next upstream manhole cover of the sewer serving such drainage piping shall be protected from backflow of wastewater by installing an approved type of backwater valve. Fixtures on floor levels above such elevation shall not discharge through the backwater valve.

Buildings with laterals which connect to a double service or a joint lateral (a privately owned *shared* lateral pipeline that receives wastewater flow from two or more parcels) should also install a backflow prevention device to protect private property.

In the event of a pipeline stoppage in the joint lateral, a backflow prevention device installed on each private building lateral would inhibit wastewater in the joint lateral from backing-up through the private building lateral into the building served.

Backflow prevention devices are especially useful in areas where a joint lateral provides service to parcels of significantly different elevations.

A-7.10 Testing of Sanitary Sewer Facilities

The following tests will be required for all sanitary sewer facilities connected to the District's sanitary sewer system. Testing shall not be permitted until all excavation, backfilling (for other utilities), and grading (for roadway sub grade and structural section) in the immediate area of the sanitary sewer facility has been completed.

Gravity Pipelines
After the sewer pipelines have been properly backfilled to a depth where additional backfilling will not disturb the position of the pipe, all sections shall be tested either *hydrostatically* or with an *air* test. In no case shall the required minimum backfill be less than 30 inches above the top of the pipe before subjecting the pipeline to the tests. All necessary materials and equipment to make the test shall be provided by the owner.

Hydrostatic Test – Mainline
A section of sewer pipeline shall be prepared for testing by plugging the upper side of the downstream manhole and all openings in the upstream manhole except the downstream opening.

A minimum 5-foot test head shall be applied to the upstream end of the pipeline by filling the manhole to the appropriate depth. Where grades are slight, two or more sections between manholes may be tested at once. Where grades are steep, and excessive test heads would result by testing from one manhole to another, test tees the full size of the sewer main shall be installed at intermediate points so the maximum head on any section under test will not exceed 15 feet.

The allowable leakage in the test section shall not exceed 350 gallons per mile per day per inch diameter of pipe. If it is necessary or desirable to increase the test head above 5 feet, the allowable leakage will be increased at the rate of 80 gallons for each foot of increased in head.

Test sections showing leakage in excess of that allowed shall be repaired or reconstructed as necessary to reduce the leakage to that specified above and the pipeline retested.

Hydrostatic Test – Lateral
Lateral testing shall consist of plugging the downstream end of a building lateral, placing a section(s) of the pipe in the vertical branch of the building cleanout and filling the test section with water. At least 8 vertical feet of water (measured from the highest point of the pipeline to the top of the water column on the upstream cleanout riser of the test section) shall be used for the test. In pipelines with minimal fall, cleanout risers may need to be temporarily extended above ground to achieve the 8 vertical foot static water level. In no cases shall the vertical distance measured from the lowest point of the pipeline test section to the water surface in the cleanout riser exceed 15 feet. Additional cleanouts may have to be installed in steep pipelines and the pipeline tested in sections. The water level in the pipeline shall remain constant for 5 minutes for a 4-inch or 6-inch lateral. If a loss occurs, the pipeline may be retested one additional time. If a second loss occurs. This constitutes a failure of the pipeline.

Air Test
Air testing may be used in lieu of the hydrostatic testing. Air testing shall be as specified herein unless otherwise directed by the General Manager. Length of pipeline tested shall be limited to the length between adjacent manholes. Air test procedure shall be as follows:

Pressurize the test section to 4.0 pounds per square inch and hold above 3.5 pounds per square inch for not less than 5 minutes. Add air if necessary to keep the pressure above 3.5 pounds per square inch. At the end of this 5 minute saturation period, note the pressure (must be 3.5 pounds per square inch min.) and begin the timed period. If the pressure drops 0.5 pounds per square inch in less than the time given in the following table, the section of pipe shall not have passed the test.

If the time for the pressure to drop 0.5 pounds per square inch is 125 percent or less of the time given in the table, the pipeline shall immediately be re-pressurized to 3.0 pounds per square inch and the test repeated.

For 8 inch and smaller pipe if the pressure drops less than 0.5 pounds per square inch after the initial pressurization and air is not added, the section undergoing test shall have passed.

If the test is not passed, the leak shall be found and repaired to the satisfaction of the General Manager and the pipeline shall be retested.

House waste piping shall be considered part of the building lateral to which it is connected. No adjustment of test time shall be allowed to compensate for the smaller diameter of the house waste piping.

Lateral Size	Minimum Time in Seconds
4	122
6	184
8	245
10	306
12	367
15	460

For larger diameter pipe, use the following formula:

Minimum time in seconds = 370 x pipe diameter in feet

When the prevailing ground water is above the sewer being tested, air pressure shall be increased 0.43 pounds per square inch for each foot the water table is above the flow line of the sewer.

The pressure gauge used shall be supplied by the contractor, shall have minimum divisions of 0.10 pounds per square inch, and shall have an accuracy of 0.04 pounds per square inch. Accuracy and calibration of the gauge shall be certified by a reliable testing firm at 6 month intervals or when requested by the General Manager. In addition, the General Manager may compare the contractor's gauge with a District owned gauge at any time.

Mandrel Testing

Installed pipe shall be tested to insure that vertical deflections for plastic pipe do not exceed the maximum allowable deflection. Maximum allowable deflections shall be governed by the mandrel requirements stated herein and shall nominally be:

Nominal Pipe Size	**Percentage**
Up to and including 12-inch	5.0
Over 12- to and including 30-inch	4.0
Over 30-inch	3.0

The maximum average ID shall be equal to the average OD minus two times the minimum wall thicknesses per applicable ASTM Standards. Manufacturing and other tolerances shall not be considered for determining maximum allowable deflections.

Deflection tests shall be performed not sooner than 30 days after completion of placement and densification of backfill. The pipe shall be balled and flushed, and cleaned prior to testing.

For all pipes less than 24-inch ID, a mandrel shall be pulled through the pipe by hand to ensure that maximum allowable deflections have not been exceeded. If the mandrel fails to pass, the pipe will be deemed to be over deflected. Prior to use, the mandrel shall be approved by the engineer or by another entity approved by the engineer. Use of an uncertified mandrel or a mandrel altered or modified after certification will invalidate the test.

Any over deflected pipe shall be uncovered and, if not damaged, reinstalled.

Damaged pipe shall not be reinstalled, but shall be removed from the work site. Any pipe subjected to any method or process other than removal, which attempts, even successfully, to reduce or cure any over deflection, shall be uncovered, removed from the work site and replaced with new pipe.

The mandrel shall:

- Have an odd number of legs (nine legs minimum) and be a rigid, nonadjustable mandrel having an effective length not less than its nominal diameter.

- Be fabricated of steel, be fitted with pulling rings at each end, be stamped or engraved on some segment other than a runner indicating the pipe material specification, nominal size, and mandrel OD (e.g., PVC D 3034-8 inch – 7.524 inch, ABS Composite D 2680-10 inch-9.584 inch); and be furnished in a suitable carrying case labeled with the same data as stamped or engraved on the mandrel. For the pipe IDS nominally 24-inch and larger, deflections shall be determined by a method submitted to and approved by the engineer. If a mandrel is selected, the minimum diameter, length and other requirements shall conform to the dimensions and requirements as stated above.

All costs incurred by the contractor attributable to deflection testing including any delays, shall be borne by the contractor.

Television Tests

Each section of sewer pipeline shall be subject to inspection by use of a closed circuit television (CCTV) camera. Use of the CCTV inspection shall not relieve the contractor of the responsibility for performing the other tests outlined in this section nor shall it be used in lieu thereof.

Pre-inspection Preparation – CCTV inspection will not be scheduled or made until the following operations are complete:

- All sewer pipelines are installed and backfilled to finished grade, or, if pavement will be finished grade, to the final street sub grade, but prior to paving.

- All structures are in place and pipelines are accessible from structures.

- All pipelines have been balled, flushed and tested for deflection.

- All pipelines have been successfully tested.

Arrangements for Inspection – When the contractor determines that the pipeline is ready for inspection, the contractor shall notify the District and request a date for the CCTV inspection. The District shall notify the contractor of the scheduled date. If it is determined by the contractor that the job site will not be ready or accessible for the CCTV inspection on the scheduled date, as notified, the contractor shall notify the District of the necessary cancellation at least 48 hours in advance of the scheduled inspection. Rescheduling shall be accomplished in the same manner as for the initial inspection.

The contractor shall bear the cost of all CCTV inspection made for the purpose of determining acceptance. The District shall charge the contractor for labor, materials, equipment, and travel time associated with all inspections and CCTV cameral assistance.

Grounds for Refusal of Acceptance – All pipelines that have been televised will be evaluated by the District for deficiencies. If no deficiencies are noted, the sewer installation portion of the work will be considered satisfactory.

The following conditions are considered unacceptable for sewer pipelines and will result in refusal of acceptance:

- Standing water greater than1/2-inch depth
- Joint separations greater than recommended by manufacture
- Cocked joints present in straight runs or on the wrong side of pipe curve
- Chipped pipe
- Cracked pipe
- Infiltration or exfiltration
- Debris or other foreign matter
- Protrusions or excessive roughness in pipe
- Offset joint
- Out of round or diameter deflected pipe
- Improper alignment or curves not conforming to specified line
- Upset in normal hydraulic regime
- Any conditions that prevents the economical, safe or reasonable use of the sewer
- Pipeline sags in excess of 1/2-inch standing water

Video – Televised sewer pipelines will be recorded and the images retained by the District. The contractor may view video within 2 working days at the District Offices by making an appointment. All video produced as a result of the work shall be the sole property of the District and shall remain under its care and custody at all times.

Re-inspection – If the sewer pipeline offered for acceptance fails to meet applicable specifications, the District shall have a right to re-inspect after correction of defects and to charge a re-televising fee in accordance with current District rates. The CCTV testing process shall be repeated as necessary until all defects have been corrected to the satisfaction of the District.

Force Main Testing

Pressure Class PVC Pipe – Each section of PVC pipe shall be tested in accordance with the Inspection and Testing methods outlined for pressure PVC pipe in the UniBell Handbook of PVC Pipe with the following conditions. The pipeline shall be subject to a test pressure of not less than 150 pounds per square inch or the service pressure plus 50 pounds, whichever is greater, without exceeding the pressure rating for the pipe at the lowest end of the pipe. The pressure shall be applied for a minimum of 2 hours. All exposed joints, bends, angles, and fittings shall be closely examined during the test. Any part of the pipeline which proves to be defective shall be replaced and the pipeline retested.

Ductile Iron Pipe – Each section of ductile iron pipe shall be tested in accordance with Hydrostatic Testing methods outlined for ductile iron water mains in the Ductile Iron Pipe Research Association Handbook with the following conditions. The pipeline shall be subjected to a test pressure of not less than 150 pounds per square inch or the service pressure plus 50 pounds, whichever is greater, without exceeding the pressure rating for the pipe at the lowest end of the pipe. The pressure shall be applied for a minimum of 2 hours. All exposed joints, bends, angles, and fittings shall be closely examined during the test. Any part of the pipeline which proves to be defective shall be replaced and the pipeline retested.

Manhole, Grease Interceptor, Sand/Oil Interceptor, Overflow Tanks, and Enclosed Valve Box Testing

All manholes, grease interceptors, sand/oil interceptors, overflow tanks, and enclosed valve boxes shall be tested for leakage as indicated below. Newly installed structures shall be tested twice. An initial test shall be observed by the District prior to backfill. If structure fails initial test, repairs can be performed on exterior of structure. Upon acceptance of the initial test, a second test shall be performed after backfill.

Water Test – All inlet and outlet pipes shall be plugged and the units filled with water to the top of the manhole frame(s). The water should be introduced into the test section at least 4 hours in advance of the official test period to allow the unit and joint material to become saturated. The unit shall then be refilled to the original water level. At the beginning of the test, the elevation of the water in the unit shall be carefully measured from a point on the manhole rim. After a period of 4 hours, the water elevation shall be measured from the same point on the manhole rim and the loss of water during the test period calculated. If this calculation is difficult, enough water shall be measured into the unit to restore the water to the level existing at the beginning of the test, and the amount added taken as the total leakage. The allowable leakage shall not exceed 1/4 inch drop from top of cone. Units showing leakage in excess of that allowed shall be repaired or reconstructed as necessary to reduce the leakage to that specified above and the unit retested.

Vacuum Test – Vacuum test by using acceptable equipment approved by the District. Vacuum test equipment shall be used per the manufacturer's specifications. A vacuum of 10-inches mercury should be drawn on the manhole. The time, in seconds, for the vacuum to drop to 9-inches mercury shall be measured and shall not be less than the times listed below for various manholes and interceptors.

Time (Sec)	**Manhole Diameter** (In)	**Interceptor Size** (Gal)
60	48	
75	60	
90	72	
80		500 to 999
120		1,000 to 1,499
150		1,500 to 1,999
180		2,000 to 2,499

Note: Grease interceptors and sand/oil interceptors shall be completely drained and cleaned before initiation of the water or vacuum test.

For existing manhole and interceptors, the District may allow a visual inspection in lieu of pressure testing.

A-7.11 Pavement Restoration

Asphalt Concrete Pavement Restoration
The contractor shall perform asphalt concrete patching and pavement restoration work in accordance with State of California Department of Transportation Standard Specifications, Section 39, and Contract Drawings and documents.

This work shall consist of furnishing and mixing aggregate and asphalt binder at a central mixing plant, spreading and compacting the mixture as specified herein in all areas affected by trenching and construction activities under this contract.

Asphalt concrete is designated as Type B and shall meet requirements Section 39 of the State of California Department of Transportation Standard Specifications (July 1992) Type B Asphalt Concrete.

Asphalt concrete shall be produced in a batch mixing plant, a continuous pug mill mixing plant or a dryer-drum mixing plant. Proportioning shall be either by hot-feed control or cold-feed control.

Asphalts
Asphalt binder to be mixed with aggregate shall be Grade AR4000. The amount of asphalt binder to be mixed with the aggregate will be specified in the special provisions.

Liquid asphalt for prime coat shall conform to the provisions in "Liquid Asphalts", and shall be SC-250.

Aggregates
All aggregates shall be clean and free from decomposed materials, organic material and other deleterious substances.

Coarse aggregate is material retained on the No. 4 sieve; fine aggregate is material passing the No. 4 sieve; and supplemental fine aggregate is added fine material passing the No. 30 sieve, including dust from dust collectors.

Unless otherwise specified in the special provisions, the aggregate grading to the various types of asphalt concrete shall conform to the following:

Type	Grading
B, PG 64-28	1/2" maximum

The combined aggregate, prior to the addition of asphalt binder, shall conform to the requirements of this section. Conformance with the grading requirements will be determined by California Test 202, modified by California Test 105 when there is a difference in specific gravity of 0.2 or more between the coarse and fine portions of the aggregate or between blends of different aggregates.

In the tables below, the symbol "X" is the gradation which the contractor proposes to furnish for the specific sieve. The proposed gradation shall meet the gradation shown in the table under "Limits of Proposed Gradation". Changes from one mix design to another shall not be made during the progress of the work unless permitted by the District Engineer. However, changes in proportions to conform to the approved mix design shall not be considered changes in mix design.

AGGREGATE GRADING REQUIREMENTS
Type B Asphalt Concrete
Percentage Passing

1/2" Maximum, Medium

Sieve Sizes	Limits of Gradation	Operating Range	Contract Compliance
3/4"		100	100
1/2"		95-100	89-100
3/8"		80-95	75-100
No. 4	59-66	X±5	X±8
No. 8	43-49	X±5	X±8
No. 30	22-27	X±5	X±8
No. 200		3-8	0-11

Sub grade
Immediately prior to applying prime coat or paint binder, or immediately prior to placing the asphalt concrete when a prime coat or paint binder is not required, the sub grade to receive asphalt concrete shall conform to the compaction requirement and elevation tolerances specified for the material involved and shall be free of loose or extraneous material. If the asphalt concrete

is to be placed on an existing base or pavement which was not constructed as part of the contract, the contractor shall clean the surface by sweeping, flushing or other means to remove all loose particles of paving, all dirt and all other extraneous material immediately before applying the prime coat or paint binder.

Prime Coat and Binder
Edges of existing pavement being joined and surface being overlaid shall receive a tack coat of SS1H bituminous binder or equivalent.

Prime coat shall be applied at the approximate total rate of 0.25 gallons per square yard of surface covered.

Prime coat shall be applied at a temperature conforming to the range of temperatures provided in the State of California Department Transportation Standard Specifications, Section 93-1.03, "Mixing and Applying," for distributor application of the grade of liquid asphalt being used.

A paint binder shall be furnished and applied to all vertical surfaces of existing pavement, curbs, gutters, and additional material is to be placed, to a pavement to be surfaced, and to other surfaces designated by the District Engineer.

Paint binder shall be applied in one application at a rate of from 0.02 to 0.10 gallon per square yard of surface covered.

Spreading Equipment
Asphalt pavers shall be self-propelled mechanical spreading and finishing equipment, provided with a screed or strike-off assembly capable of distributing the material to not less than the full width of a traffic lane if necessary.

Compacting Equipment
A minimum of one steel-tired, two-axle tandem roller weighing not less than 8 tons nor more than 10 tons shall be used for each asphalt paver to compact Open Graded asphalt concrete.

Temporary Paving
The owner shall comply with all general temporary paving requirements and special requirements of the Town of Truckee, Nevada County, Placer County, and the State of California Department of Transportation. Temporary paving (cold patch) shall be placed to grade over all backfilled trenches located within primary roadways until permanent paving is installed.

Temperature Requirements
Type B asphalt concrete shall be placed only when the atmospheric temperature is above 50 degrees Fahrenheit.

Asphalt concrete and asphalt concrete base shall not be placed when the underlying layer or surface is frozen, or when, in the opinion of the District Engineer, weather conditions will prevent the proper handling, finishing, or compaction of the mixtures.

Spreading
When directed by the District Engineer, paint binder shall be applied to any layer in advance of spreading the next layer.

Before placing the top layer adjacent to cold transverse construction joints, such joints shall be trimmed to a vertical face and to a neat line. Transverse joints shall be tested with a 12-foot straightedge and shall be cut back as required to conform to the requirements as specified in Section A-7.11, Pavement Restoration, Compacting. Connections to existing surfacing shall be feathered to conform to the requirements of smoothness. Longitudinal joints shall be trimmed to a vertical face and to a neat line if the edges of the previously laid surfacing are, in the opinion of the District Engineer, in such condition that the quality of the completed joint will be affected.

All layers shall be spread with an asphalt paver. Asphalt pavers shall be operated in such a manner as to insure continuous and uniform movement of the paver and shall lay a mat which will provide a lift of 2.5 inches in the compacted state and not less than 1.5 inches in the compacted state.

Compacting
A pass shall be one movement of a roller in either direction. A coverage shall be as many passes as are necessary to cover the entire width being paved. Overlap between passes during any coverage, made to insure compaction without displacement of material in accordance with good rolling practice, shall be considered to be part of the coverage being made and not part of subsequent coverage. Each coverage shall be completed before subsequent coverage is started.

Rolling shall commence at the lower edge and shall progress toward the highest portion, and shall be performed so that cracking, shoving or displacement will be avoided.

The completed surfacing shall be thoroughly compacted, smooth, and free from ruts, humps, depressions, or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations, or other objectionable marks in the asphalt concrete shall be discontinued, and acceptable equipment shall be furnished by the contractor.

When a straightedge 12 feet long is laid on the finished surface and parallel with the center line, the surface shall not vary more than 0.01 foot from the lower edge of the straightedge. The transverse slope of the finished surface shall be uniform to a degree such that no depressions greater than 0.02 foot are present when tested with a straightedge 12-feet long laid in a direction transverse to the center line and extending from edge to edge of a 12-foot traffic lane. Contractor shall furnish the 12-foot straight edge.

Manhole Adjustments
When manholes are adjusted to pavement grade, they shall be 1/2 to 3/4 inch below adjacent pavement surface. Asphalt concrete shall be neatly tapered from the final pavement grade to the manhole frame and cover. If the manhole is located within 2 feet of the edge of the pavement, in earth shoulders or earth flow-line areas, asphalt concrete shall be placed to a minimum 2 feet around the manhole and paved out at 45 degrees to the edge of existing pavement.

A-7.12 Clean Up

During the progress of the work, the owner shall keep the entire job site in a clean and orderly condition. Excess or unsuitable backfill material, broken pipe or other waste material shall be removed from the job site. Spillage resulting from hauling operations along or across existing

streets or roads shall be removed immediately by the contractor. All gutters and roadside ditches shall be kept clean and free from obstructions. Any deviation from this practice shall have prior approval from the General Manager.

Before final acceptance of the work, the owner shall carefully clean up the work and premises, remove all temporary structures built for the work, and remove all surplus construction materials and rubbish of all kinds from the grounds which he has occupied and leave them in a neat condition.

A-7.13 Environmental Considerations

Water Pollution
The owner shall exercise every reasonable precaution to protect ditch conduits, streams, lakes and reservoirs from pollution with fuels, oils, bitumen, chemicals, concrete and other harmful materials and shall conduct and schedule his/her operations so as to avoid or minimize muddying and silting of said conduits, streams, lakes and reservoirs.

Nothing in these Standards shall relieve the owner of the responsibility for compliance with Sections 5650 and 12015, California Fish and Game Code, or other applicable statutes relating to prevention or abatement of water pollution.

Erosion control features shall be constructed concurrently with other work and at the earliest practicable time. Care shall be exercised to preserve vegetation beyond the limits of construction.

When borrow material is obtained from other than commercially operated sources, erosion of the borrow site during and after completion of the work shall not result in water pollution. The material source shall be constructed, where practicable, so that water will not collect or stand therein.

The requirements of this section shall apply to all work performed within the District and to all non-commercially operated borrow or disposal sites used for work within the District. The word "stream" as hereinafter used shall be construed to mean ditch, conduit, stream, river, lake or reservoir.

The owner shall be completely responsible for compliance with all local, town, county, state, and federal regulations pertaining to water pollution and soil erosion including the payment of any fines or penalties imposed by any governmental agency as a result of work performed by or for the owner.

Stream Zones
Where working areas encroach on live streams, barriers adequate to prevent the flow of muddy water into streams shall be constructed and maintained between working areas and streams, and during the construction of such barriers, the muddying of streams shall be held to a minimum.

Prior to the removal of material from an area beneath a flowing stream, a bypass channel shall be constructed in a location which will carry the stream free from mud or silt around the material removal operation.

Should the operations of the owner require transportation of materials across live streams, such operations shall be conducted without muddying the stream. Mechanized equipment shall not be operated in the channels of such live streams except as may be necessary to construct crossings or barriers and fills at channel alterations.

When operations are completed, the flow of streams shall be returned as nearly as possible to the original meandering thread without creating the possibility of future bank erosion.

Material derived from the work shall not be deposited in a live stream channel where it could be washed away by high stream flows.

Erosion Control
This work shall consist of incorporating straw and/or mulch, fertilizing, and seeding all water pipeline excavation and backfill areas; all easements which are disturbed by pipelines, ditches or access roads shall also be seeded. Areas designated as waste or borrow areas shall be seeded after final cleanup of said areas is finished.

> **Seeding:** Seed shall be uniformly distributed over the seedbed area. The seed mixture chosen shall be one which is suitable for dry soils at an elevation of 5,000 to 6,000 feet and meet the specifications for purity and viability as given Chapter XI-C of the Tahoe Regional Planning Agency's Handbook of Best Management Practices.
>
> The seeding operation shall be accomplished promptly after the cleanup of an area is completed, in no case shall the seeding operation of an exposed or disturbed area be allowed to stand fallow through winter until the following construction season.
>
> **Fertilizer:** Fertilizer shall be applied at a rate so as to provide 80 pounds of available nitrogen per acre and 100 pounds of available phosphoric acid (p2o5) per acre.
>
> **Mulch:** Wood fiber mulch shall be applied to all areas at the rate of 1,500 pounds per acre. The mulch shall be applied in a slurry with the seed and fertilizer. Straw mulch shall be a cereal grain straw, not rotted and free of noxious weeds. Straw mulch shall be applied on areas as specified in the following paragraphs at the rate of 2 tons per acre. Mulching shall follow immediately after seeding.

Erosion control shall be used on all trench excavation outside of the paved Nevada/Placer County, Town of Truckee or State of California right-of-ways.

In addition, should the cross slope grade parallel with the trench be greater than 15 percent, Douglas fir or Cedar 1 x 8 inch boards shall be placed normal to the pipe trench on 10 foot centers with 2 inches exposed above grade and extended 6 inches into original ground on each size before seeding.

A-7.14 Structural Concrete

Provide and install all cast-in-place concrete, as shown and as specified, including but not limited to the following:

- Accessories to be embedded in cast-in-place concrete, anchor bolts, etc.;

- Cutting, patching, finishing and curing of cast-in-place concrete;

- Coordination with all trades with regard to requirements for special bases, sleeves, chases, inserts, finishes, or provisions of any nature;

- Treatment of finished concrete surface.

Quality Assurance
Qualification of Workmen: All concrete work shall be completed by experienced and skilled concrete workmen working under the supervision of an experienced concrete contractor.

Reference Standards
The following references and standards are hereby made a part of this section. Nothing contained herein shall be construed as permitting work that is contrary to code requirements or governing rules and regulations.

ACI – American Concrete Institute.

- ACI 301 – "Specification for Structural Concrete for Buildings."

- ACI 304 – "Recommended practice for Measuring, Mixing and Placing Concrete."

- ACI 305 – "Recommended Practice for Hot Weather Concreting."

- ACI 306 – "Recommended Practice for Cold Weather Concreting."

- ACI 309 – "Recommendation Practice for Consolidation of Concrete."

- ACI 318 – "Building Code Requirements for Reinforced Concrete."

ASTM – American Society for Testing and Materials.

- C 31 – "Making and Curing Concrete Test Specimens in the Field."

- C 33 – "Standard Specification for Concrete Aggregates."

- C 39 – "Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens."

- C 88 – "Standard Specification for Method of Test for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate."

- C 94 – "Standard Specification for Ready-Mixed Concrete."

- C 143 – "Standard Method of Test for Slump of Portland Cement Concrete."

- C 150 – "Standard Specification of Portland Cement."

- C 157 – "Standard Method of Test for Length Change of Hardened Mortar and Concrete."

- C 171 – "Standard Specification for Sheet Materials for Curing Concrete."
- C 172 – "Sampling Fresh Concrete."
- C 233 – "Testing Air-Entraining Admixtures for Concrete."
- C 260 – "Standard Specification for Air-Entraining Admixtures for Concrete."
- C 309 – "Standard Specification for Liquid Membrane – Forming Compounds for Curing Concrete."
- C 494 – "Standard Specifications for Chemical Admixtures for Concrete."
- C 2419 – "Standard Specification for Method of Test for Sand – Equivalent Value of Soil and Fine Aggregate."
- E 329 – "Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as Used in Construction."

UBC – Uniform Building Code, Standards.

Testing Agency
Any testing Agency utilized during the course of the project should conform to the following: All reports and certificates prepared by the Testing Agency shall be signed by a Professional Engineer registered to practice as a Civil Engineer in the State of California. Test methods shall comply with the codes and standards listed.

Source Quality Control
The testing Agency shall perform tests and/or assemble the necessary data indicating conformance with specifications as follows:

- Mix Designs – Furnish a list of proportions for each proposed mix.
- Strength – For each mix, submit data showing that the proposed mix will attain the required strength in accordance with the requirements of these specifications.
- Aggregate – For each aggregate used, submit data showing that it complies with ASTM C33. Include gradation, deleterious materials, specific gravity and soundness. For coarse aggregates in mixes for site work, include abrasion.
- Cement – Furnish mill tests for all cement used. Submit this data to Truckee Sanitary District for review prior to delivering any concrete materials to the site. Mix designs, test, etc., required by this specification need not be made specifically for this job, provided that data submitted is current within the last 12 months and that in the judgment of the Testing Laboratory the test data correctly describes the materials proposed for use.
- Provide all necessary controls during batching, mixing, and placement of concrete.

The owner will perform and report on the following:

- Review mix designs, certificates of compliance, and samples of materials proposed for use;

- Test and inspect materials, as necessary, in accordance with ACI 318, for compliance with requirements;

- Take samples as required from sources designated by contractor;

- Inspect batch plant prior to any work to verify following:

    1) Plant is equipped with approved metering devices for determining moisture content of fine aggregate.

    2) Other plant quality controls are adequate.

- Compression Tests: During progress of work, take not less than five identical test specimens for standard cylinder tests at job site for each 100 cubic yards or less of class "A" and "B" concrete placed per day (except 50 cubic yards or less at underpinning), in accordance with requirements of ASTM C 31 and C 172. Make standard 7 and 28 days after casting. Keep fifth cylinder as a check cylinder for further tests if required.

- Slump Tests: Make slump tests per ASTM C 143 at time of making each set of cylinder specimens and for each truckload.

- Air Entrainment Tests: Make air entrainment test for each truckload.

Submittals
Submit mix designs for approval by owner prior to placement of any concrete.

Submit improvement plans and schedule concrete placement operations before commencing work. Show all construction, contraction and expansion joints.

Product Delivery, Storage and Handling
Protect cement from moisture and rotate stock to insure fresh materials.

Alternative Procedures
Concrete may be placed by pumping provided that pumping equipment is suitable for proposed use and provided that specific "pump mixes" are submitted with data showing that they comply with the requirements of these specifications and subject to approval of Testing Laboratory.

Concrete Mix
Class "A" – Stone aggregate concrete for use in foundations: 3/4 inch maximum size aggregate, specified minimum 28 day strength of 4,000-pounds per square inch, slump 3-inches, +/= 1-inch, 4-8 percent air entrainment, maximum water/cement ratio of 0.43.

Concrete mixes shall comply with ASTM C 94. Proportioning shall comply with Alternative 3, mixing and transporting shall comply with requirements for Truck-Mixed Concrete.

Materials

Portland Cement: Type II, ASTM C 150, with use of at least 2 years with proposed aggregates without detrimental reaction. Cement shall not exceed 150 degrees Fahrenheit at time of use. Use one brand of cement throughout the Work.

Standard Weight Aggregates: ASTM C 33 from approved pits. The maximum size used in a particular location shall be consistent with the form and dimensions of the section being placed, with the location and spacing of the reinforcing steel and with the method of vibration. The aggregate sizes shall be such as will produce dense, uniform concrete, free of rock pockets, honeycombs, or other irregularities. Aggregates for stone concrete shall conform to UBC Standard No., 26-2, except as modified by this section. Any suitable individual grading of coarse aggregates may be used, provided a workable and durably sound mix is obtained. Fine and coarse aggregate for stone concrete shall be clean, hard, fine grained, ground crushed rock or washed gravel or a combination of both, free from oil, organic matter, or other deleterious substances containing not more than 2 percent by weight of shale or cherty material.

Water: Clean and free of deleterious materials such as acids, alkalis, salts, oils, or organic substances.

Admixtures: Only if acceptable by Truckee Sanitary District.

- Water Reducing Admixtures: ASTM C 494, Type A; Grace Construction Materials "WRDA"; Masters Builders' "Pozzolith"; Sonneborn-Contech's "Trimix" or equal.

- Air Entraining Admixtures: ASTM C 260; Protec (Autolene Lubricant Company), MB-VR (The Master Builders' Company), or Plastiment (Sika Chemical Corp.).

Epoxy Materials:

- Epoxy Adhesive: Ceilcote No. 348, Concresive LPL 1001, or equal.

- Epoxy Grout: Ceilcote No. 648, Grace Vibro-Foil Grout Master Builders' Masterflow No. 713 Grout, or equal.

Grout for Base Plates: Master Builders' "Embeco 636 Grout"; Conrad Sovig's "Perma Grout"; Master Builders' "Masterflow 713", or equal.

Vapor Barrier: St. Regis Paper Company's Sisal Kraft Division "Moistop", or equal, in sheets as wide as possible to avoid joints. Provide manufacturer's recommended tape for all seams, joints, and repairs.

Hardeners: Clear, Dust-on Type: Base price on application of 50 pounds per 100 square feet. Same as Conrad Sovig's "K-Natural"; Upco Company's "Hydromat"; Lambert Corp.'s "Colorhard"; or equal.

Drypack Mortar for Form Tie-Holes and Patching: Composed of one part Portland Cement and two parts of fine aggregate and water.

Cement Mortar for Sacking: 5-1/2 parts sand, 2-1/2 parts Portland Cement, 1-1/2 parts lime hydrate by volume, plus water.

Concrete Curing Requirements:

- Seven-day full water cure.
- Manufactured curing compounds may be used in addition to the 7-day full water cure upon written approval of the General Manager.

Pre-molded Join Filler: ASTM D 1751.

Polyvinyl Water stop: Neoprene, center bulb type, or equal.

Inspection
Prior to placement of concrete, contractor shall be responsible for the examination and acceptance of all conditions affecting the proper installation of his/her work and shall not proceed until all unsatisfactory conditions have been corrected including the following:

- Approval of compaction tests of fill and backfill.
- Completion of the placement of drainage fills or slab base.
- Completion of form work.
- Placement of reinforcement.
- Placement of embedded items.
- Completion of review of form work and reinforcing.

Slab on Grade and Footing
Vapor Barrier: Place completely over capillary break material sub grade. Lap joints 6 inches minimum, and continuously tape. Fit tightly to penetrations, and continuously tape. Install continuous tape at all edge conditions.

Sand Cushion: Place a 2-inch sand cushion on top of membrane immediately after placing membrane.

Clean and roughen all construction joint surfaces by removing latence and exposing sound aggregate. Thoroughly clean and moisten contact surfaces before placing fresh concrete.

Cleaning and wetting forms and sub grade: Remove foreign matter accumulated in forms, rigidly close ports and openings left in the form work immediately prior to starting concrete placing. Wet wood forms sufficiently to tighten up cracks. Wet other materials sufficiently to reduce suction and maintain workability of the concrete mix. Thoroughly clean tools used in transporting, placing, and consolidating concrete immediately after each use. Wet sub grade surfaces, immediately prior to placing slabs on grade.

Placing Concrete
Transport concrete from batching plant to place of final deposit as rapidly as practicable. Place concrete before initial set has occurred and in no event after it has contained water for more than 90 minutes and 45 minutes when concrete temperature exceeds 85 degrees Fahrenheit. Convey concrete from mixer to forms as rapidly as possible and deposit as nearly as practicable in its

final position by methods which will prevent segregation or loss of ingredients. Thoroughly vibrate and tamp concrete so that all parts of forms are filled and so that no voids remain in mass or on surface. Take special care to work concrete through and around reinforcing steel.

Deposit concrete in horizontal layers not over 8-inches deep. Use spouts, elephant trunks or other approved means as necessary to avoid segregation when dropping concrete. Free fall shall not exceed 5 feet unless approved by the District prior to placement.

Use as many vibrators and tampers as necessary to secure desired results for different parts of structure. Make extra vibrators available during placing of concrete, ready for service in case any vibrator in use fails.

For vibrating of concrete, use a mechanical internal vibrator having a frequency of not less than 4,000 impulses per minute. Place vibrating element directly in concrete and not attached to either inside or outside of forms or to reinforcing steel. Do not over vibrate concrete.

Provide runways for buggies or other approved means of conveying concrete into place to prevent displacement of forms or reinforcement. Do not run buggies directly over reinforcing steel or on planks supported directly by reinforcing steel. Take care not to displace reinforcement, anchor bolts or other materials that are to be embedded in concrete.

Where placing of concrete has been stopped for a sufficient period of time so that shrinkage or warp has separated forms and concrete, draw forms into firm contact with concrete before placing additional concrete. Prevent any shoulder or ledge formed at a cold joint.

Bring surfaces to be finished to proper grade, strike off, finish in a workmanlike manner. Ensure smooth level surfaces.

Add no water when placing concrete.

Finishing Concrete
Sidewalks, Exterior Slabs on Grade and Curbs:

- Compact, screed, level, and tamp with a grid tamper to raise a thin mortar bed to the surface. Steel trowel and medium broom after concrete has hardened sufficiently to prevent the drawing of moisture to the surface. Do not dust with dry materials. Avoid excessive tamping and surface mortar.
- Tool mark slabs where shown. Round all edges to a 1/2-inch radius.

Curing Concrete
During initial 7 days of curing, concrete and form work shall be kept continuously moist so that a film of water remains on the concrete or form work surface. This may be accomplished through continuously fogging or spraying with water or with moisture retaining fabric coverings. Any covering must be free of any substance that would be harmful to the concrete or the curing process. New fabric coverings should be thoroughly rinsed in water prior to use.

Weather Protection
Cold Weather Requirements:

- All concrete placed during cold weather shall meet the requirements of the American Concrete Institute committee report (ACI 306)

- Recommended concrete temperature for placement during cold weather are defined in ACI 306, Table 3.1 as follows

		Section size, minimum dimension, in. (mm)			
Line	Air Temperature	<12 in. (300 mm)	12-36 in. (300-900 mm)	36-72 in. 900-1800 mm)	>72 in. (900-1800 mm)
Minimum concrete temperature is placed and maintained					
1	----------	55 F (13 C)	50 F (10 C)	45 F (7 C)	40 F (5 C)
Minimum concrete temperature as mixed for indicated air temperature*					
2	Above 30 F (-1 C)	60 F (16 C)	55 F (13 C)	50 F (10 C)	45 F (7 C)
3	0 to 30 F (-18 to -1 C)	65 F (18 C)	60 F (16 C)	55 F (13 C)	50 F (10 C)
4	Below O F (-18 C)	70 F (21 C)	65 F (18 C)	60 F (16 C)	55 F (13 C)
Maximum allowable gradual temperature drop in first 24 hr after end of protection					
5	----------	50 F (28 C)	40 F (22 C)	30 F (17 C)	20 F (11 C)

* For colder weather a greater margin in temperature is provided between concrete as mixed and required minimum temperature of fresh concrete in place

Hot-Weather Requirements:

- In hot weather, take suitable precautions to avoid drying of concrete prior to finishing operations. Provide windbreaks, sun shades, fog sprays, or other devices as directed and as required.

- Concrete deposited in hot weather shall not have a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints. Concrete temperature shall be less than 90 degrees Fahrenheit, unless higher temperatures are permitted by the Architect.

Defective Work

Any concrete work not formed as shown or not true to the intended alignment or not plumb or level where so intended, or not true to the intended grades and levels or that has voids or rack pockets that have not been filled, or that has any sawdust, wood, or debris embedded in it, or does not fully conform to the Specifications will be deemed to be defective. Concrete finish which is not properly surfaced as specified, or which varies more than 1/4 inch from the required finish grade (except floors having drains), or which has any roughened top surfaces, or which does not connect properly to the adjoining work will be deemed to be defective. Defective work shall be removed and be replaced with workmanship and materials complying with the requirements of the Contract Documents at no increase in Contract Price and with no time extension allowed.

Patching and Grinding

Formed Surfaces: Patch tie holes and defective areas immediately after form removal. Bonding grout approximately one part Portland Cement to one part fine sand passing a #30 sieve, mixed to creamy consistency. Patching mortar shall be made of the same material and approximately

the same proportions as used for concrete, except that coarse aggregate shall be omitted and mortar shall consist of not more than one part Portland Cement to 2-1/2 parts damp loose sand by volume. Combine white and gray Portland Cement as necessary to match color of surrounding concrete. Use no more mixing water than necessary for handling and placing. Mix patching mortar in advance and allow to stand with frequent mixing with trowel without adding water until it has reached the stiffest consistency that will permit placing. Remove honeycombed and other defective concrete down to sound concrete. Dampen area to be patched and at least 6 inches surrounding the area. After water has evaporated from surface, a coat of bonding grout shall be well brushed into the surface. When the bonding grout begins to lose water sheen, apply patching mortar, thoroughly consolidate and strike off slightly higher than surrounding surface. All patching mortar shall set undisturbed for a least 1 hour before final finishing. Do not finish patches for 7 days. Tie holes shall be cleaned, dampened, and solidly filled with patching mortar. All areas to be repaired or grouted are to be inspected by the owner and architect prior to repair.

Slabs on Grade: After entire slab is finished, shrinkage cracks may appear which shall be patched as follows:

- Where the slab is not exposed or where appearance is not important, fill cracks larger than 1/32 inch wide with cement grout and strike off level with surface.

- Where slab is exposed and appearance is important, repair all unsightly cracks in a manner satisfactory in appearance to the Architect. If this cannot be accomplished, then the concrete shall be considered defective.

Wall Finishes:

- Sack all exposed exterior wall surfaces to fill only superficial air voids and irregularities which are larger than 1/4 inch in diameter with a cement mortar grout, remove all excess grout by sacking without use of water. Take care in application of grout and in sacking excess grout from surface in order that all voids are filled without a thickness of grout being built up on adjacent concrete surface. The resultant finish and texture of concrete shall match existing finish and texture.

Clean Up
Wash and mop clean all interior finish surfaces and sweep and hose clean exterior surfaces after removal of protective covering. Leave all finish surfaces clean and free from oil, paint, plaster, stain and foreign substances and in approved condition.

Reinforcement
Bar reinforcement shall be deformed, and shall be intermediate grade conforming to the "Billet-Steel Bars for Concrete Reinforcement" (ASTM Designation A15), and be of the shape and dimensions shown on the improvement plans. Before any reinforcing steel is delivered to the job site, two sets of prints of the shop drawings shall be submitted to the General Manager for his/her approval, showing the number, length, and a dimensioned bending diagram of all steel bars and rods. Such approval is intended only as an additional precaution against errors and the responsibility for furnishing and placing steel in accordance with the details shown on the improvement plans and as specified shall still remain with the contractor.

A-7.15 Pump Station Structures

Doors
All man doors shall be hollow metal with all steel door frame. Minimum size 3068. Doors shall be adequate size to move interior equipment in and out of maintenance.

Clearance Requirements
Where works are to be constructed within vaults, houses, or other enclosing structures, the desired minimum horizontal clearance around, outside of, and between the extreme dimensions of appurtenances such as pipes, valves, fittings, flanges, pumps, tanks, and auxiliary equipment shall be 24 inches; the desired minimum horizontal clearance between said extreme dimensions and the vertical walls or enclosing surfaces of said structures shall be 24 inches; and the desired minimum vertical clearance under and between said extreme dimensions and the horizontal floors or bottom surfaces shall be 18 inches. Electrical equipment clearances shall be per the current National Electrical Code.

Floor Drains
The floor or bottom areas of the above-mentioned structures shall be drained by means of sloping floors, catch basins with grates, and drain lines constructed to terminate at an approved location, and will not re-circulate into the enclosing structure. The catch basin grates shall have a free flowing area of not less than 50 square inches, and the minimum drain line shall be 4 inch size. Where gravity discharge through a drain line is not feasible, a power driven sump pump or line pump, automatically activated by a liquid level sensing devise, shall be installed. Gravity drains shall be equipped with a trap and drain to the wet well.

The enclosing structures shall be designed so that precipitation, surface water, and ground water cannot enter said structure. Floors shall be at least 6 inches above outside ground level. The outside ground level shall have adequate storm drainage facilities not connected to the sanitary sewer system.

Materials and Workmanship
All materials used or incorporated in any works to be accepted by the District shall be new and the best market quality. All work shall be completed in the best, most thorough, substantial and workmanlike manner.

All material, labor and finished work shall be subject to the approval of the General Manager as to its quality and fitness, and shall be immediately removed if it does not meet with his/her approval.

Improvement Plans
The owner shall submit to the General Manager two prints of all structure plans for his/her review. These improvement plans shall be on 24 x 36 inch sheets.

All structures above ground shall be compatible architecturally with existing or future conditions and shall be approved as to appearance prior to final structure design.

Insulation
Insulation shall be placed if required. The owner shall submit to the General Manager insulation calculations based upon a low temperature of minus 28 degrees Fahrenheit.

Surface Treatment
The structures surface treatments shall be approved by the General Manager.

Loads
The minimum vertical snow load applicable to the design of roofs and similar surfaces including water tanks shall conform to the following schedule.

Elevation of Structure	Normal Snow Load
5500 and greater, but less than 6000	220 PSF
6000 and greater, but less than 6500	260 PSF
6500 and greater, but less than 7000	300 PSF

Wind loads shall conform to the uniform building code.

Two sets of calculations shall be sent to the General Manager.

Concrete
All concrete used in District structures shall conform to Structural Concrete, Section A-7.14 of this specification.

Excavation and Backfill
Excavation and backfill for buildings and structures shall be approved by the General Manager.

The owner shall, at no expense to the District, take compaction tests one for each 100 cubic yards of structure backfill by an approved commercial testing laboratory with two copies of the results sent to the General Manager.

The moisture density test shall be ASTM D1557, Method A.

The in place density shall be determined by ASTM D1556.

Access Roads and Site Work
Access roads to District sanitary sewer facilities shall be of an all-weather type with a minimum width of 12 feet of traveled way. This width may be increased if length or location becomes a consideration to the District.

The road grades shall be a maximum of 8 percent. The structural section for access roads and parking areas shall be a minimum of 6 inches of aggregate base Class 2, and 4 inches of asphalt concrete.

There shall be adequate consideration given to roadway and site drainage.

Tops of all excavation slopes and toe of embankment slopes shall have "V" type ditches draining the runoff away from the site area.

All structure sites shall allow for a minimum of one pickup truck parking and adequate room to turn around where necessary.

The District will require free title to all structure sites and a recorded access easement on the road extending a minimum of 5 feet beyond any construction limits.

Welding
All welding shall conform to the welding handbook of the American Welding Society, and as modified herein.

Welder Qualification
All welders working on any portion of work to be incorporated in the District sanitary sewer system shall be certified as specified below and as may be required by the General Manager.

Fabrication and testing of test specimens for qualification of welding procedures and qualification of welding operators shall be completed at no cost to the District.

Test reports shall be submitted to the General Manager in triplicate and approved by him in writing prior to start of fabrication. Test reports shall become the property of the District.

The General Manager may require tested specimens to be furnished to him for review after testing. In the event that test specimens are not satisfactory, the welder will be disqualified.

The contractor shall advise the General Manager in advance of testing weld specimens and shall provide access to the test area so that testing may be witnessed by the General Manager, and bear all costs of such inspection.

Welder qualification tests will be evaluated in accordance with requirements of the AWS except that radiographic examinations will not be used in lieu of the guided bend tests. Radiographic examinations may be used as a supplement to other tests and should they indicate that a test weld is unsound, the General Manager may disqualify the welder.

In lieu of the AWS requirements, qualification tests for tack welding will be the same as the qualification tests required for butt welding material up to and including 3/4 inch thick.

All certification tests shall be performed at the owner's expense by a commercial testing laboratory approved by the General Manager.

Welding Testing
If in the opinion of the General Manager, the workmanship of the welds are of such a type or nature as to require testing, the owner shall have the necessary tests performed by a commercial testing laboratory at the owner’s expense with the results delivered to the General Manager.

Pipelines and Fittings
All piping and appurtenances shall be installed in the position and to accurate lines, elevations, and grades as shown on the District approved improvement plans or specified herein. All pipelines shall be rigidly supported and braced by approved hanger, brackets, or other devices. When temporary supports are used, they shall be sufficiently rigid to prevent any shifting or distortion of the piping or related work.

Pipe shall be cleaned of dirt and scale prior to installation and all joints swabbed clean before jointing. All fittings necessary for the satisfactory alignment and arrangement of piping and all necessary unions and cleanouts shall be adequately supported throughout and the weight thereof

shall be carried independently of the pump casings or the equipment. All pipe work shall be mounted in a truly workmanlike manner with pipe work parallel with vertical and horizontal axis of reference. All sections of pipe shall be rigidly bolted or joined together after being cut accurately to length in such a manner as to relieve any and all parts of equipment of undue strain resulting from closure of flanged or other joints or connections. Equipment shall be so positioned and aligned that no strain shall be induced within the equipment during or subsequent to the installation of pipe work.

Threaded joints shall be made up with the best quality pure lead paste or approved equal, carefully and smoothly placed on the male threads only. All screwed joints shall be made tight with tongs and wrenches; caulking of any kind will not be permitted.

Use of thread cement or caulking to make joints tight is prohibited. All cut ends shall be reamed to full bore before assembly.

Flanged joints shall be made up square, with even pressure on the gaskets, and shall be watertight. Gaskets shall be heat quality rubber packing not less than 1/16 inch thick and compatible with wastewater applications. All gaskets shall be the full width of the flanges to which they are applied.

All piping within structure shall have bolted flanged joints except as authorized by the General Manager.

The owner shall, if requested by the District, demonstrate the disassembly and reassembly of the station piping.

Bolts and nuts for flanged joints shall be made of the best quality of defined iron or mild steel and shall have sound, well-fitting threads. Bolts shall be provided with hexagonal chamfered heads and nuts. The underside of all bolt heads and nuts shall have true surfaces at right angles to the axis of the bolts. The lengths of the bolts shall be such that after joints are made up, the bolts shall protrude through the nuts, but in no case shall they protrude more than 1/2 inch. All bolts shall have an anti-seize compound applied to all male threads.

Emergency Storage
All stations shall be designed to store a minimum of 2 hour peak flow from high wet well alarm to overflow by use of overflow tanks or pipeline retention.

Generators
All stations serving more than 9 residences shall have back-up generators.

Dehumidifiers, Heating, Ventilation, and Air Condition
Where necessary these types of equipment shall be installed such that the control of the environment within wastewater lift stations and/or other District structures may be controlled.

Heaters shall be required in structures where cold sensitive equipment is located. Cabinets containing cold sensitive equipment shall be equipped with heat strips or heat ventilation. Piping located above ground or in such a manner that exposure to extreme cold would be evident if the heating system failed shall be avoided.

Dehumidifiers where required shall conform to the following. The moisture removing capability of the dehumidifier shall vary with the temperature and relative humidity. The minimum capacity rating at 80 degrees Fahrenheit shall be 15.5 pints per day at 60 percent relative humidity. The maximum capacity at 80 degrees Fahrenheit shall be 25 pints per day at 90 percent humidity. The dehumidifier shall be controlled automatically by an adjustable humidistat and low air temperature cut out with contacts of adequate capacity for the dehumidifier motor.

Ventilation shall be accomplished by using a ventilating blower with sufficient capacity in cubic feet per minute to ventilate the enclosing structure. Minimum guidelines for air changes per hour shall be taken from the current publication of NFPA 820, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*. A gas detection system shall be installed to check for levels of oxygen, hydrogen sulfide, and explosive gases. The indicators on the gas detection system shall be located such that personnel entering the building will receive notification of hazards. Telemetry equipment shall be connected to the gas detection system to remotely notify District personnel in the event there is a detection of dangerous levels of explosive gases.

Air conditioning shall be installed if the horsepower requirements of the pump motors are such that overheating will be a consideration. Air-conditioning type and size shall be approved by the General Manager.

Calculations for environmental conditions within the lift station shall be submitted with lift station improvement plans.

A-7.16 Pump Station Electrical Work

These Standards cover in general the Districts requirements. The developer shall have his/her engineers specify in additional detail all necessary items of electrical work not mentioned herein.

Materials
All materials shall be new, of the quality herein specified, free from defects and approved by the Underwriters' Laboratories for the purpose for which they are used. Materials shall be of uniform type and make throughout.

Equipment Identification
All panel boards, remote control switches, push buttons, terminal boxes, etc., shall be properly identified with a descriptive nameplate. Nameplate shall be made of 1/16-inch laminated plastic with black background and white letters. Size of letters shall be 1/8 inch high for equipment in device box or boxes and 1/4 inch high for panel board, terminal can, or larger items. Letters shall be machine engraved. Punched strip tape type nameplates and cardholders in any form are not acceptable.

Working Space
Provide adequate working space around electrical equipment in compliance with the National Electrical Code. In general, provide 6-1/2 foot of headroom and 42-inch minimum clear work space in front of panel boards and controls.

Wire
Installed in conduit and control panels shall be stranded copper with 600 volt type "THHN" or "THWN" insulation. Direct burial cable shall not be allowed.

All other wires shall be stranded type copper wire of not less than 98 percent conductivity. Wires shall bear the Underwriters' label, be color coded and be marked with gauge, type, and manufacturer's name on 24 inch centers.

Wire splices and joints are allowed only in readily accessible junction boxes. #10 AWG or smaller shall be twisted together electrically and mechanically secured and insulated with approved type insulated electrical spring connectors Scotchlok or Ideal. Threaded type wire nut, porcelain or Bakelite are not acceptable. Joints and connections for #8 AWG, or larger, shall be made with Burndy, T & B or approved equal, solder less tool applied pressure lugs and connectors. Un-insulated lugs and wire ends shall be insulated with layers of plastic tape equal to insulation of wire and all irregular surfaces properly padded with "Scotchfill" putty prior to application of tape. Tape shall be equal to Scotch #33, General Electric #AW-1 or H.K. Porter #107.

Lace or wire tie conductors together in a neat and workmanlike manner in panel boards, wire ways, raceways pull boxes, and similar locations. Plastic wiring ducts are preferred as an alternate to lace or wire ties.

#12 AWG wire shall be the minimum size wire used for lighting and power circuits. Wires run in conduit shall conform to code regulations as to number of wires and conduit size. All wire ends shall be identified with Thomas & Betts WM-A-Z and/or WM-0-45 or approved equal. Identification shall be as shown on the electrical drawings.

Outlet Boxes
Shall be galvanized or sherardized, one-piece pressed steel type. Boxes for fixtures shall be not less than 4 inches and be equipped with fixture stud. Boxes shall be at least 1-1/2 inches deep. Boxes must be accurately placed for finish, independently and securely supported by adequate wood backing or by manufactured adjustable channel type heavy duty box hanger. Boxes in unfinished areas, installed exposed, shall be cast type "Condulet" for switches and convenience outlets. Exposed boxes mounted below 6 feet from finished floor shall be cast type.

Codes, Rules, Regulations
All work shall be in full accordance with the latest edition of the National Electrical Code, California Electrical Code, and all state, federal, local, and other laws including the requirements of the serving utility company. However, when these specifications call for materials or construction of a better quality or larger sizes than required by the above-mentioned rules and regulations, the provisions of the specifications shall take precedence.

Pilot Lights
Shall be of the oil-tight type and shall have push-to-test feature. Color of lens shall be red unless noted otherwise on drawings.

Switchboard Motor Controls
Shall generally consist of the following components: main circuit breaker; combination draw out circuit breakers and full voltage or soft-start motor starters; dry transformers; 120-volt panel boards; and all appurtenances.

The switchboard/motor controls shall consist of vertical sections to accommodate the circuit breakers, motor starters and control devices. The control structures shall be free-standing, designed and tested in accordance with the latest NEMA ICS 1970 standards, and shall be metal enclosed indoor type, completely inter-wired in accordance with steel with NEMA Class I Type B standards. Fabrication shall be of code gauge steel with 1-1/2 x 1-1/2 inch welded structural steel angles at the top and bottom of the frames. Control cabinets shall be designed for multiple alignment with continuous main horizontal bus and multiple sections riveted together.

Doors and blank cover plates shall be code gauge steel with gaskets around each door except panel board. Doors shall use semi-concealed piano type hinges and be secured with slotted head, one-quarter turn captive speed fasteners or approved equal.

All bus bars shall be rectangular and formed of Alcan tin-plated copper supported on fiberglass insulators and be properly braced to withstand mechanical stresses of not less than 22,000 amperes. Each combination starting unit shall be mounted on a chassis, having a height as required by the particular size of the combination starter and circuit breaker unit. The chassis shall be so housed and constructed as to isolate the components from adjoining circuits. All motor starters shall be of the magnetic type for across-the-line starting with ambient compensated thermal and adjustable overload protection in each phase. Overload heaters shall be sized for the load they are protecting. Motor starters and circuit breakers shall be I.T.E., Square D, or approved equal. Each combination starter shall be protected by a molded case circuit breaker having an interrupting capacity of not less than 14,000 amperes (symmetrical) and/or as called for on the drawings. Adjustable time delay relays shall be provided, where shown on drawings, to start motors in sequence to limit starting demand on commercial power. Ammeters shall be used as necessary.

Time delay relays, control power transformers and auxiliary relays as necessary shall be provided in each cubicle and each internal and external component shall be clearly identified.

Components shall be mounted on removable back panels, drilled and tapped from the front. They shall not protrude into or restrict wire ways. Push buttons, selector switches, meters and pilot lights shall be visible and operable externally, through gasket, die-cut openings in the unit door. Thermal overload protective devices in combination starters and branch circuit protective devices shall have an external operating device. The circuit breaker shall be interlocked with the door so that the circuit must be de-energized before the door can be opened. A semi-concealed interlock "defeater" arrangement shall be provided. Provisions shall be made for padlocking the breakers with a minimum of three padlocks in the "on or off" position.

All plug-in equipment not mounted horizontally shall have readily removable physical restraining devices to prevent their vibrating loose and falling out.

A wiring diagram specifically detailed for each cubicle shall be furnished and installed inside each cubicle in a door mounted holder.

A continuous ground bus shall extend through all motor control centers. Provide space heaters and thermostats with a calibrated dial adjustment in each section.

All motor control centers and switchboards shall be mounted on 1-1/2 inch concrete slap raised above normal floor level. Grouting will not be accepted. Provide anchor bolts. At locations shown on improvement plans, maintain a minimum of 2 inch air space between rear of

switchboards and concrete or metal walls. The 1-1/2 inch concrete pads shall be provided under this section of the specifications to fit the exact size and shape of the switchboards.

Identification of electrical interior controls shall be of a plastic coated material, or other permanent type of marking, as approved by the General Manager. Dymo tape is not accepted. The permanently attached marking shall be attached to each of the following, but not necessarily limited to such: relays, timers, terminal blocks, starters, control transformers, etc. Identification of each item shall correspond to wiring diagram of final shop drawings.

Final adjustments of equipment shall be made by qualified representative of each manufactured item.

Lighting Fixtures and Lamps
Shall be as shown in the Fixture Schedule complete with lamps listed therein, and shall be U.L. approved, listed and labeled for use as installed. All fixtures of a kind shall be of identical manufacture, appearance and finish. Fixtures shall be located where shown on improvement plans. Where structural conditions require slight deviations, resulting layout shall be symmetrical and as approved by the General Manager.

Bussing
All bussing shall be of copper with sizes based on current code requirements or a current carrying capacity of not over 1,000 amperes per square inch of cross-section. Bars shall be 1/4 inch thickness minimum. All contact surfaces shall be cleaned bright and silver-plated by submergence in an electrolytic bath. Busses shall be rigidly supported and thoroughly braced to match short circuit values of the main circuit breaker.

Circuit Breakers
The main and distribution circuit breakers shall be molded case type with trip ratings as called for in the schedule on the drawing.

Each circuit breaker shall be identified with an engraved laminated phenolic plate showing the load served or the function of the breaker. The nameplate shall be attached with oval head machine screws tapped into the front of the board, or some other equally effective means.

Grounding
Ground fittings shall be of approved manufactured type, installed and connected to conform to Code requirements. The neutral conductors and noncurrent-carrying parts of equipment at each installation shall be grounded in accordance with the applicable Code. Ground conductor shall be copper having a current capacity per N.E.C., but not smaller than No. 6 AWG. Exercise every precaution to obtain good contact at all panel boards, outlets, etc. Where it is not possible to obtain good contact, the conduits shall be bonded around the boxes with an insulated conductor, No. 6 AWG or larger, connected to the conduits by means of approved clamps.

All equipment cases, motor frames, etc., shall be completely grounded to satisfy the requirements of the N.E.C. and the Electrical Safety Orders.

Conduits
Rigid Steel Conduit shall be standard weight, mild steel pipe, zinc coated on the outside by a hot dipping, sherardizing, or metalizing process. The inside and outside of the conduit shall be finished with a protective coating.

Fittings, such as couplings, elbows, bends, etc., shall be subject to the same requirements as for rigid steel conduit. All couplings and unions shall be the threaded type assembled with red leaded joints made absolutely tight to exclude water. Unions shall be Crouse Hinds UNY or UNF or approved equal.

Electrical Metallic Tubing (E.M.T.) shall be cold rolled steel tubing with zinc coating on the outside and a protective enamel coating on the inside.

Fittings shall meet the same requirements for finish material as E.M.T. They shall be the watertight compression type requiring the tightening of a nut. Indenters will not be allowed.

A flexible conduit shall be liquid tight except where used with a recessed light fixture. Conduit shall be galvanized with extruded polyvinyl covering and with watertight connectors. Minimum size shall be 1/2 inch except where supplied as part of approved manufactured assemblies.

All conduits shall be rigid, except that E.M.T. may be used at the following locations:

- In dry locations in furred spaces.
- In partitions other than concrete or solid masonry.
- For exposed work indoor above 6 feet.

Conduits installed in contact with the ground, in sand or gravel-fill shall be rigid steel with two protective coverings of Koppers' Bitumastic #50 or equal, applied after couplings and fittings are in place, each coat not less than 1/32 inch thick when dry. Conduit shall be run concealed in areas having finished ceilings and in furred walls. Conduit may be run exposed where so permitted by the General Manager. Exposed conduit below 6 feet shall be rigid type. Conduit run exposed shall be neatly installed parallel and at right angles to the structural members.

Conduit shall be fastened to the structure with pipe clamps. Conduits up to and including 1-1/2 inch trade size shall be supported at 5 foot intervals or less.

Cap conduit during construction by means of manufactured seals; swab out conduits before wires are pulled in.

Make water-tight conduits projecting through roof by proper flashing.

Wet Well Electrical Equipment
The electrical equipment used in the wet well must meet the National Electrical Code (NEC) requirements for Class I, Division I, groups C and D hazardous atmospheres. The electrical control cabinet shall also be isolated from the wet well to meet the above hazardous atmospheres. If sensors or other electrical equipment is used that does not meet the NEC requirements for hazardous atmospheres, they shall be electrically isolated with approved intrinsically safe barriers.

Telemetry
Telemetry will be required where wet wells, pump stations and other types of mechanical facilities are to be incorporated into the District sanitary sewer system. The owner shall include a complete telemetry system which shall conform to the existing District telemetry plans and system. The proposed system shall be approved by the General Manager.

Tests
Upon completion of construction and adjustment of all equipment, all systems shall be tested under the direction of the General Manager to demonstrate that all equipment furnished and installed and/or connected under the provisions of these standards shall function electrically in the manner required.

All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and between phase conductors and ground not less than the requirements of the National Electrical Code. All circuits shall be tested for proper neutral connections.

Record Drawings and Operating Manuals
Record Drawings and Operating Manuals shall be furnished in three bound sets, covering the following items:

- Record drawings of contract electrical documents showing clearly exact locations of all underground conduits as installed. All deviations from contract drawings shall be shown. This information shall be presented by the contractor on revised prints of original tracings. Record drawings shall be presented at completion of project and before final payment is due.

- Record drawings of all switchboards, panel boards, wiring diagrams and control equipment.

- Detailed control wiring diagrams, both schematic and construction wiring for all switchboards, motor starters, transformers. Included herein shall be copies of individual cubicle wiring diagrams posted inside motor starter cubicles as noted under switchboard specifications. All wires, connections, terminals, etc. shall have an individual identification code.

- Complete instruction, maintenance and overhaul manuals, clearly showing and explaining operation and overhaul of all starters, circuit breakers, controls and all electrical equipment.

- Renewal parts lists for all equipment requiring maintenance, adjustment or repairs.

- Complete step-by-step sequential explanation of relay contact and device operation for all controls. The written explanation shall be clearly coordinated to device symbols and numbers on the elementary wiring diagrams.

- Complete step-by-step sequential instructions and precautions for system start-up as well as system shut down.

- All material called for above shall be bound and indexed in stiff back, loose leaf, plastic covered binder.

Guarantee

The owner shall leave the entire electrical system in proper working order and shall, at his/her own expense, replace any work, material, or equipment furnished by him which develops defects within 1 year from the date of acceptance.

STANDARD DRAWINGS

District Code and Standard Drawings in PDF are available for
downloading on the District's website
www.truckeesan.org

Table of Contents – Standard Drawings

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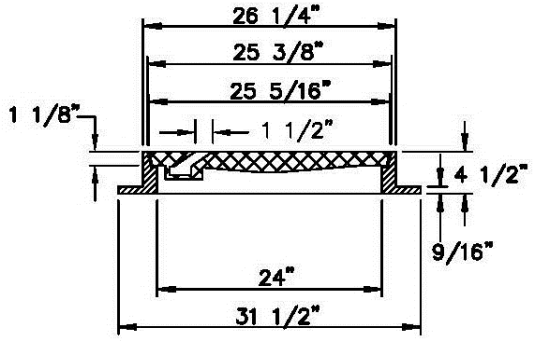
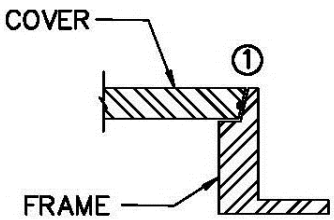
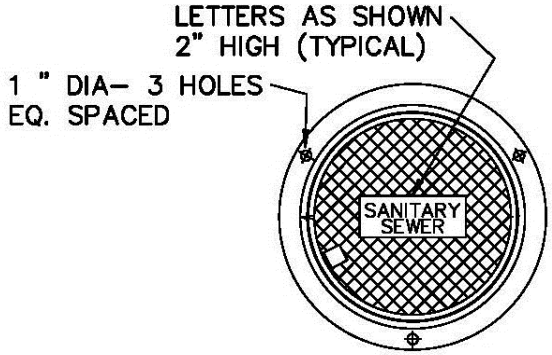
STANDARD TAPERED FRAME & COVER



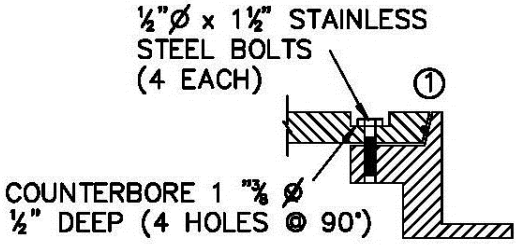
SECTION VIEW

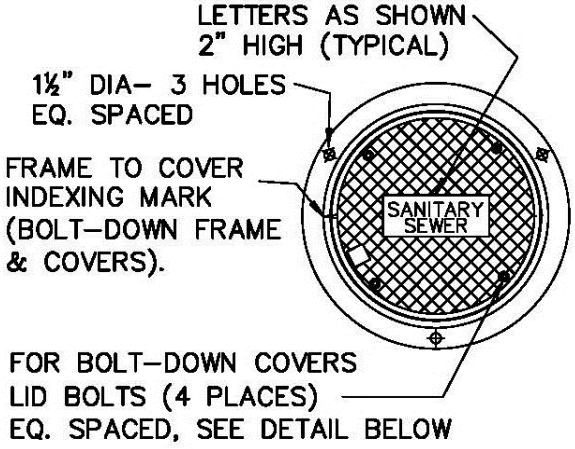
① MANHOLE LID
1/4"x 1/8" DEEP MACHINE GROOVE COVER RIM FOR "O" RING.
1/4" NEOPRENE #N-439"O" RING IN LID, MATING SURFACES OF FRAME & COVER MACHINED.
GREASE "O" RING LIGHTLY ON FINAL ASSEMBLY
"O" RING MUST BE IN COVER.





BOLT-DOWN FRAME & COVER TO BE USED ONLY WHEN REQUIRED BY DISTRICT





Scale: NTS

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A PUBLIC AGENCY
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Ordinance 1–2021: TSD Code Book Standard Drawings

Manhole Frame and Cover

Figure 1

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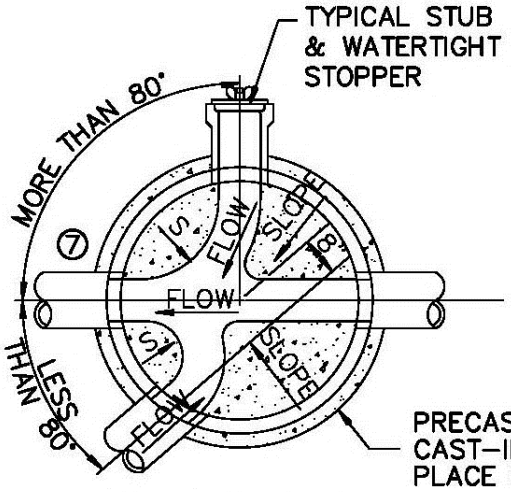
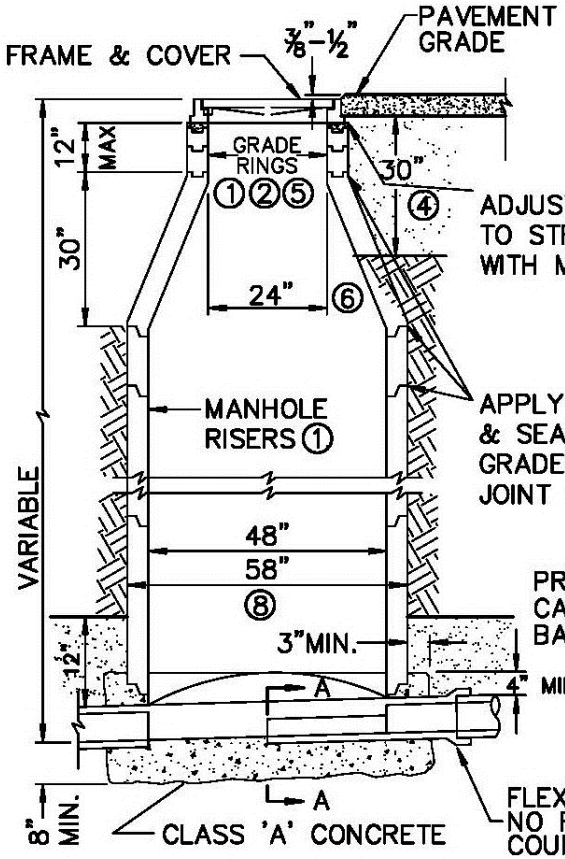
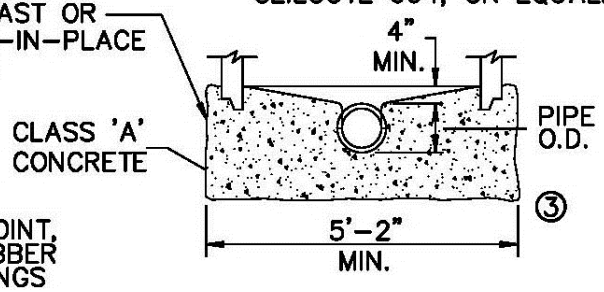


FLOOR PLAN



TYPICAL SECTION



SECTION A-A

NOTES:

① REINFORCED CONCRETE GRADE RINGS, CONES, PIPE RISERS OR APPROVED PRECAST MANHOLE SECTIONS SHALL CONFORM TO CURRENT A.S.T.M. SPEC. NO. C-478.

② MANHOLES IN PAVED AREAS SHALL HAVE AT LEAST ONE 2-INCH GRADE RING INSTALLED ON TOP OF THE CONE.

③ FOR CAST-IN-PLACE BASES, CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH. REINFORCING SCHEDULE TO BE PROVIDED TO DISTRICT.

④ CLASS 2 BACKFILL AT 95% R.C. IN ALL STREETS, CLASS 3 AT 90% R.C. IN OTHER AREAS.

⑤ CHIMNEY SEAL REQ'D ON ALL MANHOLES IN PAVEMENT. 2" MINIMUM VERTICAL MATING SURFACE REQUIRED AT INSIDE TOP OF CONE. CONES WILL BE REJECTED IF THERE IS DAMAGE TO THE CONE.

⑥ ECCENTRIC CONES PERMITTED ONLY WITH GENERAL MANAGER'S APPROVAL

⑦ MANHOLES MUST PROVIDE A MINIMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE TV CAMERA.

⑧ MANHOLE OVER 16' IN DEPTH SHALL BE 72" IN DIAMETER.

⑨ PIPE PENETRATIONS SHALL BE TRIMMED FLUSH TO SUPPORTING CONCRETE

⑩ INTERIOR SURFACES OF MANHOLES RECEIVING DISCHARGE FROM FORCE MAINS SHALL BE COATED WITH A CORROSION RESISTANT EPOXY COATING. CEILCOTE 664, OR EQUAL.

Scale: NTS

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Type "A" Manhole

Figure 2

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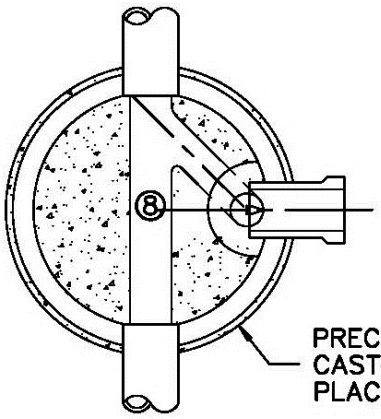


FLOOR PLAN

NOTES:

① REINFORCED CONCRETE GRADE RINGS, CONES, PIPE RISERS OR APPROVED PRECAST MANHOLE SECTIONS SHALL CONFORM TO CURRENT A.S.T.M. SPEC. NO. C-478.

② MANHOLES IN PAVED AREAS SHALL HAVE AT LEAST ONE 2-INCH GRADE RING INSTALLED ON TOP OF THE CONE.

③ FOR CAST-IN-PLACE BASES, CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.

④ CLASS 2 BACKFILL AT 95% R.C. IN ALL STREETS, CLASS 3 AT 90% R.C. IN OTHER AREAS.

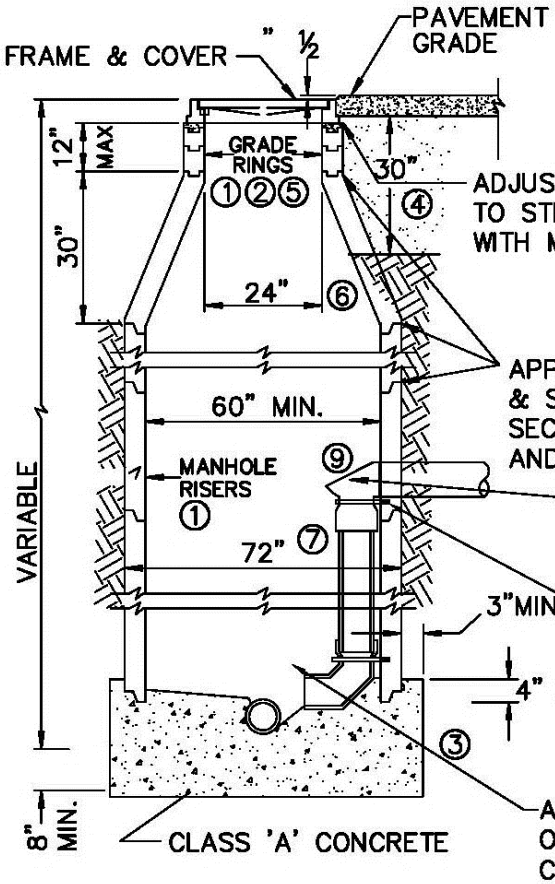
⑤ CHIMNEY SEAL REQ'D ON ALL MANHOLES LOCATED IN PAVEMENT. 2" MINIMUM VERTICAL MATING SURFACE REQUIRED AT INSIDE TOP OF CONE. CONES WILL BE REJECTED IF THERE IS DAMAGE TO THE CONE.

⑥ ECCENTRIC CONES PERMITTED ONLY WITH GENERAL MANAGER'S WRITTEN APPROVAL

⑦ MINIMUM PIPELINE DROP 5 VERTICAL FEET.

⑧ MANHOLES MUST PROVIDE A MINIMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE TV CAMERA.

⑨ INSIDE DROP CONNECTIONS SHALL USE DROP BOWL BY RELINER-DURAN, INC. (860) 434-0277 OR APPROVED EQUAL



TYPICAL SECTION

APPLY RAMNEK PRIMER & SEALANT TO BARREL SECTIONS, GRADE RINGS AND ALL JOINT SURFACES (TYP.)

INSIDE DROP BOWL AND HOOD TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS

SECURE ALL FITTINGS TO MANHOLE WALL WITH STAINLESS STEEL CLAMPING BRACKETS AT 4' INTERVALS (MIN. OF 2)

ALL INTERIOR CONCRETE SURFACES OF DROP MANHOLES SHALL BE COATED WITH A CORROSION RESISTANT EPOXY COATING. CEILCOTE 664, OR APPROVED EQUAL.

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Ordinance 1-2021: TSD Code Book Standard Drawings

Drop Connection Manhole

Figure 3

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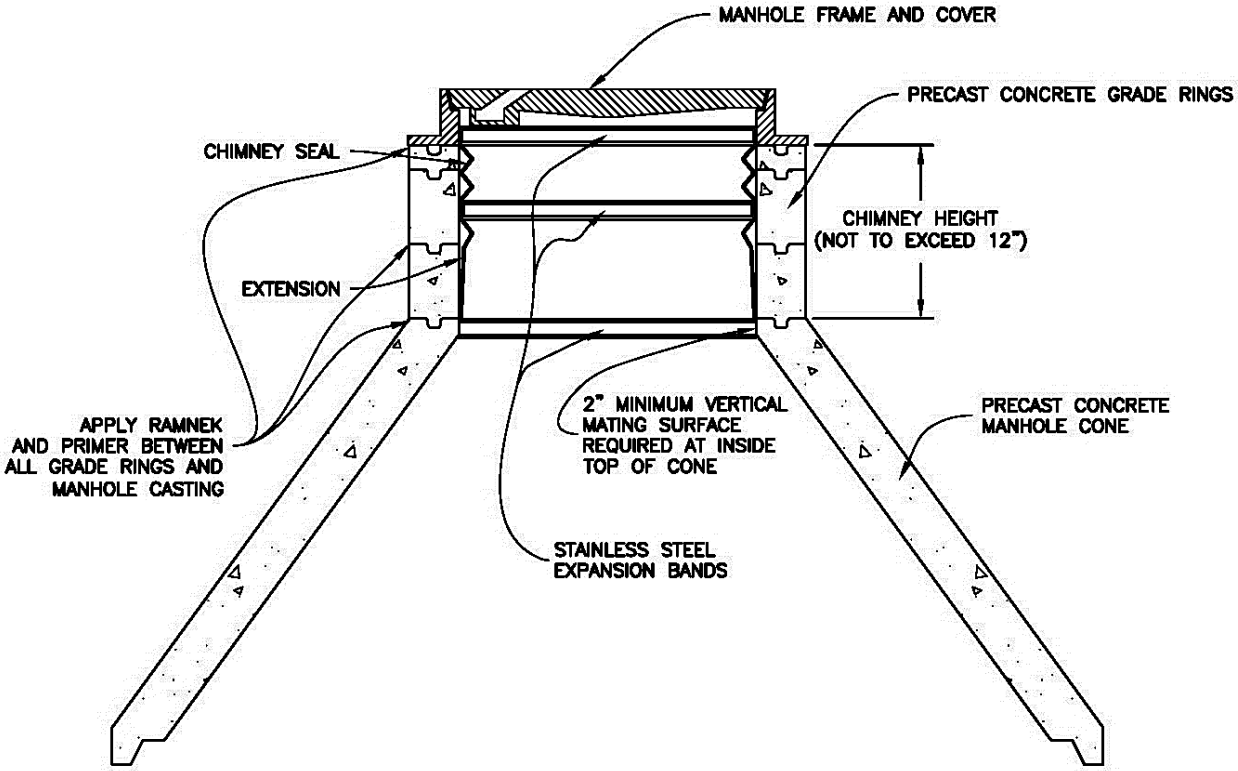

CHIMNEY HEIGHT	SEAL
0 Through 4 1/2"	Chimney Seal Only
4 1/2" Through 10"	Seal + 7" Extension
10" Through 12"	Seal + 10" Extension

NOTE: FRAME OFFSETS AND DIAMETER DIFFERENTIALS WILL REDUCE SEAL/EXTENSION SPAN HEIGHT

CONES WILL BE REJECTED IF THERE IS CONE DAMAGE

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Internal Manhole Chimney Seal

Figure 4

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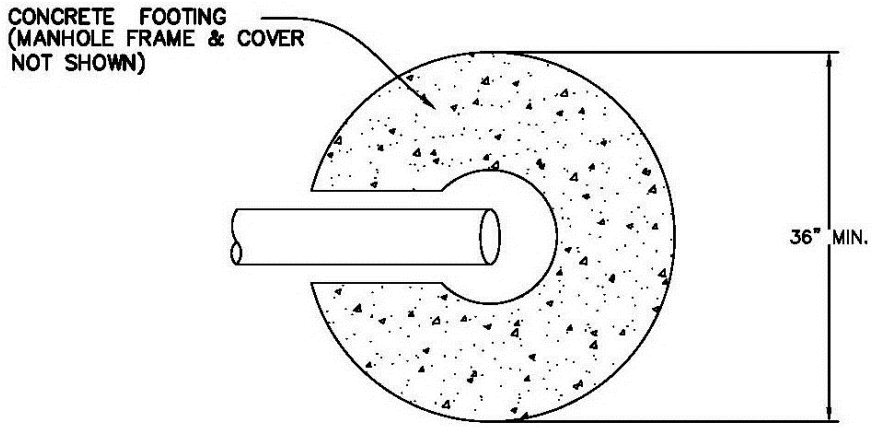
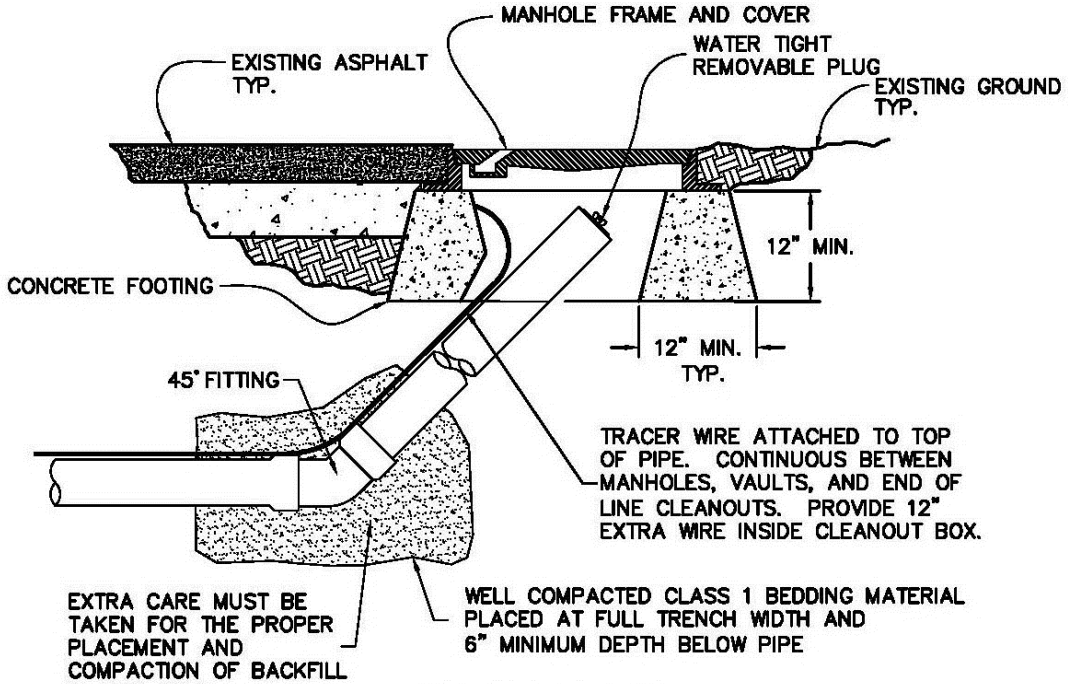


PLAN VIEW



PROFILE VIEW

Scale: NTS

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End of Line Cleanout Assembly

Figure 5

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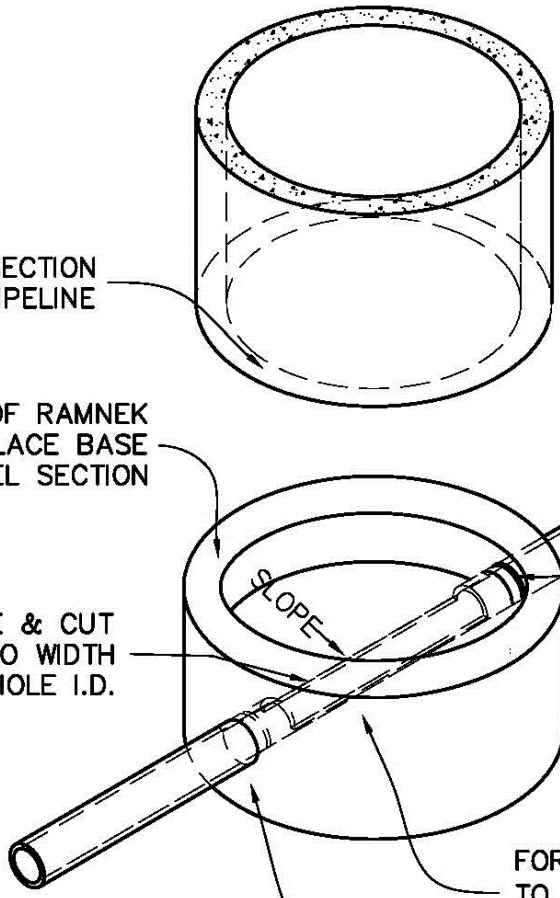

PRECAST BARREL SECTION FORMED TO CLEAR PIPELINE

MANHOLES MUST PROVIDE A MINIMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE TV CAMERA.

DOUBLE LAYER OF RAMNEK BETWEEN CAST-IN-PLACE BASE AND PRECAST BARREL SECTION

EXPOSE PIPELINE & CUT AWAY TOP HALF TO WIDTH EQUAL TO MANHOLE I.D.

WATERSTOP CENTERED IN WALL AT ALL PENETRATIONS.

FORM SLOPING MANHOLE BASE TO PIPELINE MIDPOINT. 4" MIN. VERTICAL DROP TO PIPELINE

CAST IN PLACE CONCRETE BASE 8" MINIMUM CONCRETE THICKNESS BETWEEN PIPELINE INVERT AND BOTTOM OF MANHOLE BASE POUR TO MINIMUM OF 6" OVER TOP OF PIPE PENETRATIONS. STEEL REINFORCING SCHEDULE TO BE APPROVED BY DISTRICT.

ALL INTERIOR CONCRETE SURFACES OF DROP MANHOLES AND MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE FURNISHED WITH A CORROSIONS RESISTANT EPOXY COATING. CEILCOTE 664, OR APPROVED EQUAL.

NOTE: CAST IN PLACE MANHOLE BASE, BARREL SECTION(S), CONCENTRIC CONE, FRAME & COVER, AND RELATED APPURTENANCES SHALL MEET THE REQUIREMENTS OF FIGURES 1 & 2, STANDARD DRAWINGS.

CUSTOM MANHOLE BASES MAY BE USED IN THIS APPLICATION. SPECIAL REQUIREMENTS MAY APPLY.

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Ordinance 1-2021: TSD Code Book Standard Drawings

Manhole Construction Over Existing Sewer

Figure 6

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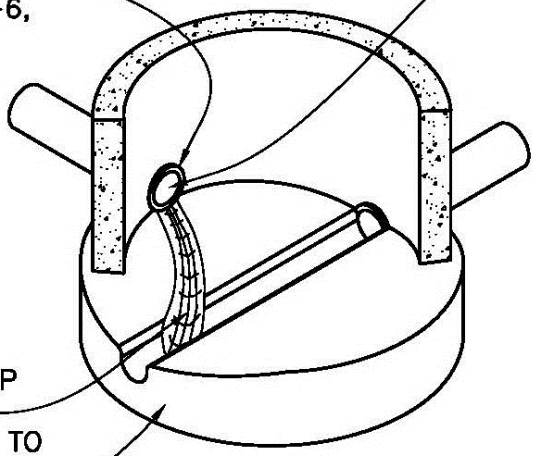
CORE DRILL EXISTING CONCRETE MANHOLE WALL AND SET NEW PIPE INVERT EQUAL TO TOP OF EXISTING SLOPED FLOOR. USE OF IMPACT OR HAMMER DRILL IS NOT ACCEPTABLE.

FLEXIBLE PIPE TO MANHOLE CONNECTOR OR MODULAR MECHANICAL TYPE WATERTIGHT SEAL (KOR-N-SEAL OR EQUIVALENT). SEE APPENDIX A-6, CONNECTION TO EXISTING MANHOLE.



NEW CHANNEL FLOWLINE – CHIP OUT CONCRETE SECTION TO PROVIDE EVEN PROFILE GRADE TO TO EXISTING PIPELINE INVERT.

EXISTING MANHOLE BASE AND CHANNEL

MANHOLES MUST PROVIDE A MINIMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE TV CAMERA.

ALL INTERIOR CONCRETE SURFACES OF DROP MANHOLES AND MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE FURNISHED WITH A CORROSIONS RESISTANT EPOXY COATING. CEILCOTE 664, OR APPROVED EQUAL.

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Ordinance 1-2021: TSD Code Book Standard Drawings

Pipe Connection To Existing Manhole

Figure 7

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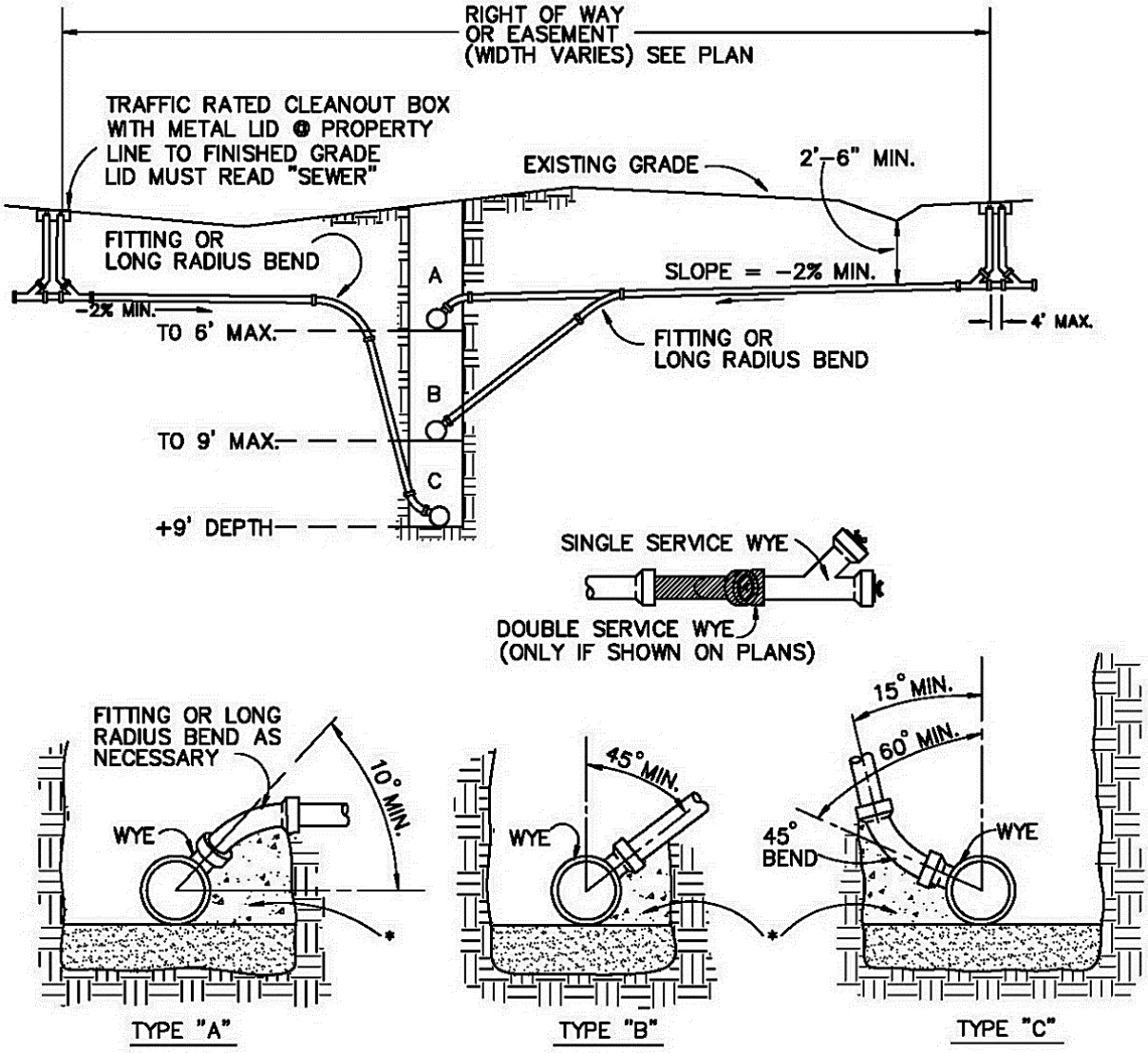

* PLACE WELL COMPACTED BEDDING MATERIAL 18" UNDER WYE BRANCH, FITTING, AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL MATERIAL TO TOP OF BEND, THE FULL WIDTH OF TRENCH.

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Service Lateral Detail (profile view)

Figure 8

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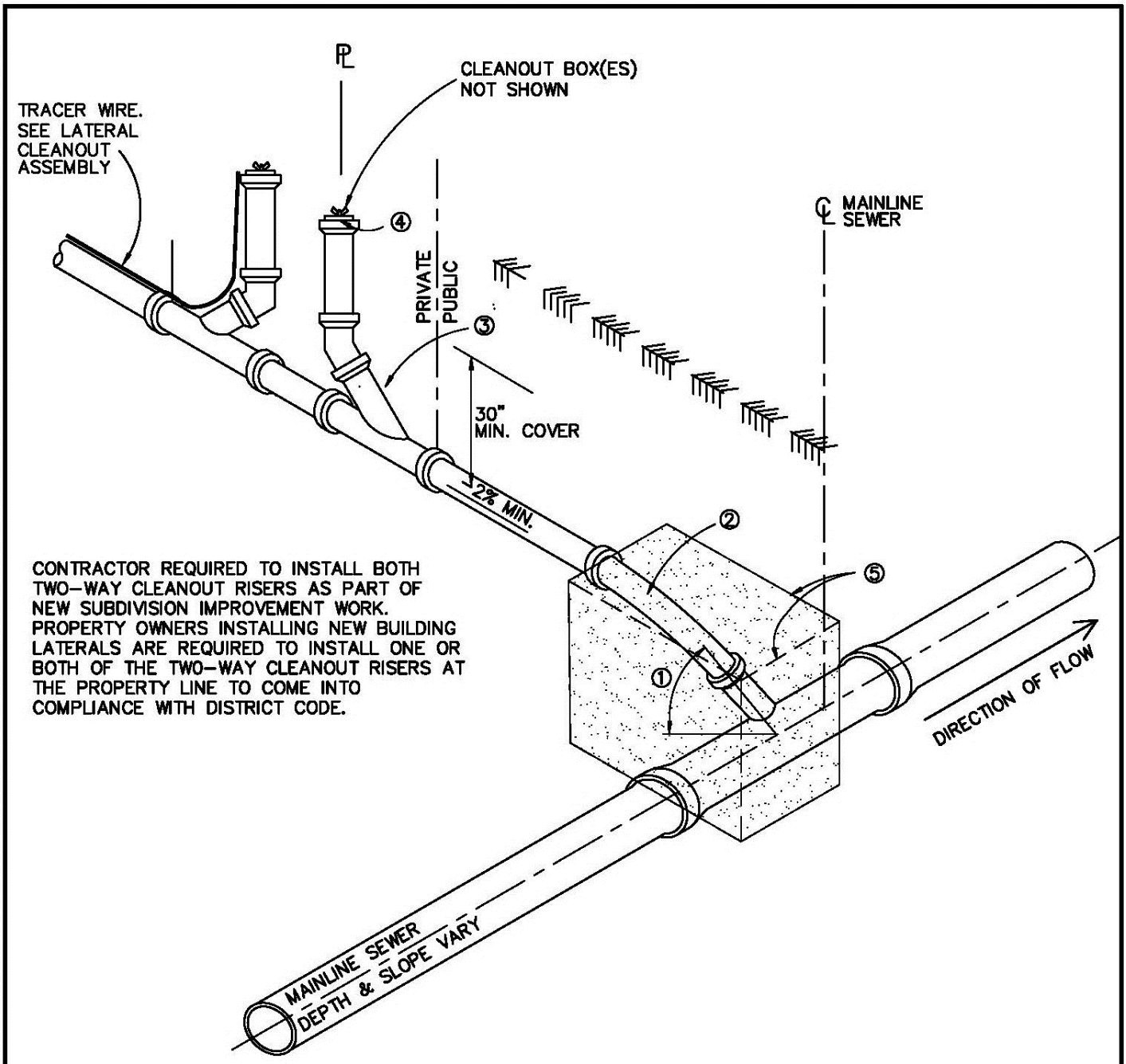

CONTRACTOR REQUIRED TO INSTALL BOTH TWO-WAY CLEANOUT RISERS AS PART OF NEW SUBDIVISION IMPROVEMENT WORK. PROPERTY OWNERS INSTALLING NEW BUILDING LATERALS ARE REQUIRED TO INSTALL ONE OR BOTH OF THE TWO-WAY CLEANOUT RISERS AT THE PROPERTY LINE TO COME INTO COMPLIANCE WITH DISTRICT CODE.

NOTES:

① 10° MIN. FOR WYE LATERAL CONNECTION

② FITTING OR LONG RADIUS BEND

③ SERVICE WYE WITH PIPE EXTENSION TO GRADE

④ WATERTIGHT END PLUG (EASILY REMOVABLE)

⑤ PLACE WELL COMPACTED BEDDING MATERIAL 18" UNDER WYE BRANCH, FITTING, AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL MATERIAL TO TOP OF BEND, THE FULL WIDTH OF TRENCH.

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Service Lateral Detail (isometric view)

Figure 9

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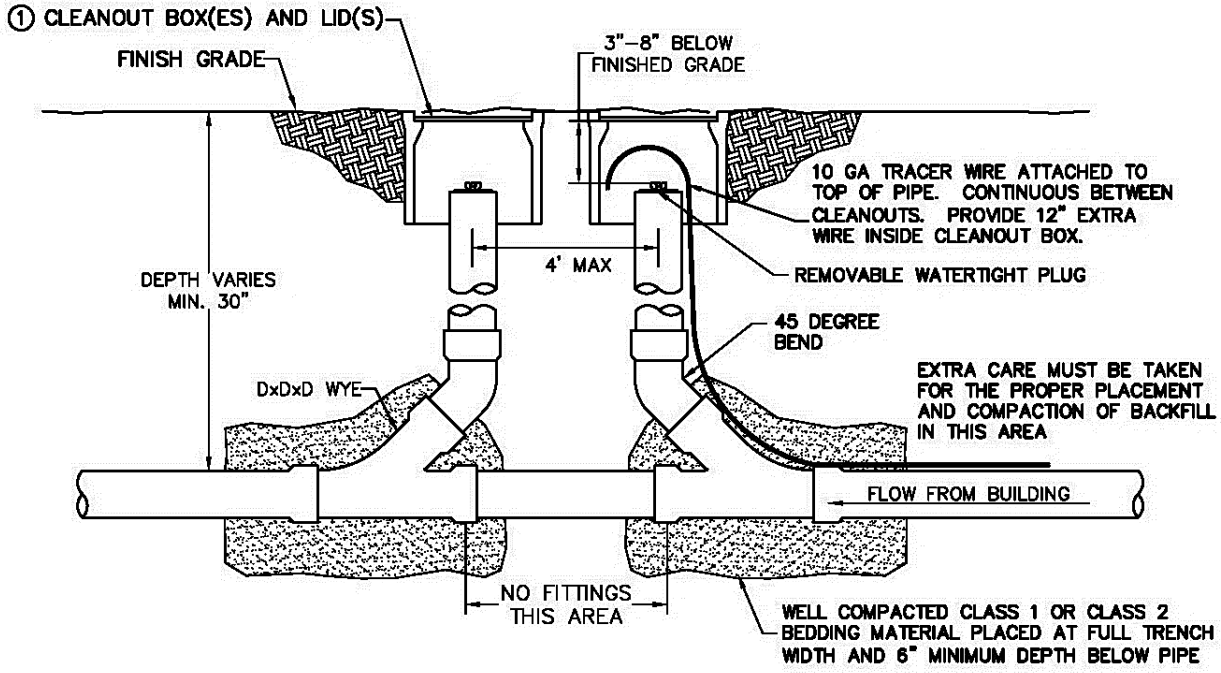
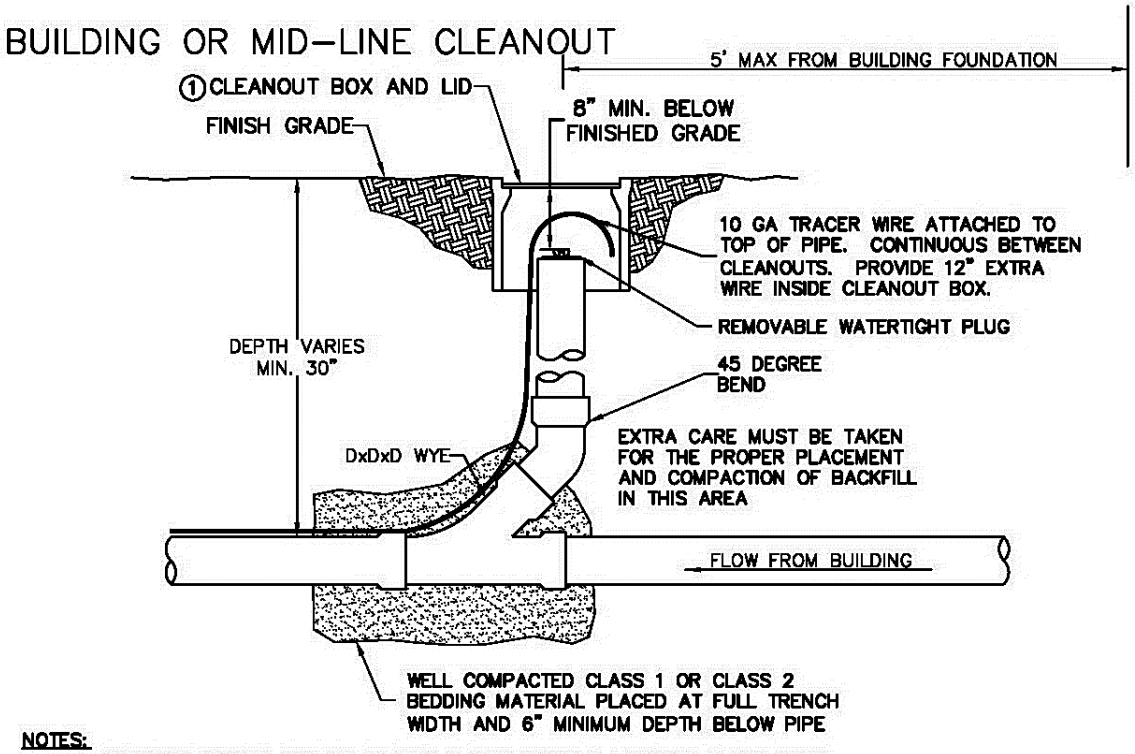
PROPERTY LINE TWO–WAY CLEANOUT



BUILDING OR MID–LINE CLEANOUT



NOTES:

① ALL CLEANOUT BOXES WILL BE TRAFFIC RATED, MADE OF CONCRETE AND STEEL WITH CAST IRON LIDS THAT READ "SEWER". A SINGLE LARGE BOX OR TWO SMALL BOXES MAY BE USED FOR THE PROPERTY LINE TWO–WAY CLEANOUTS.

Scale: NTS

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Lateral Cleanout Assembly

Figure 10

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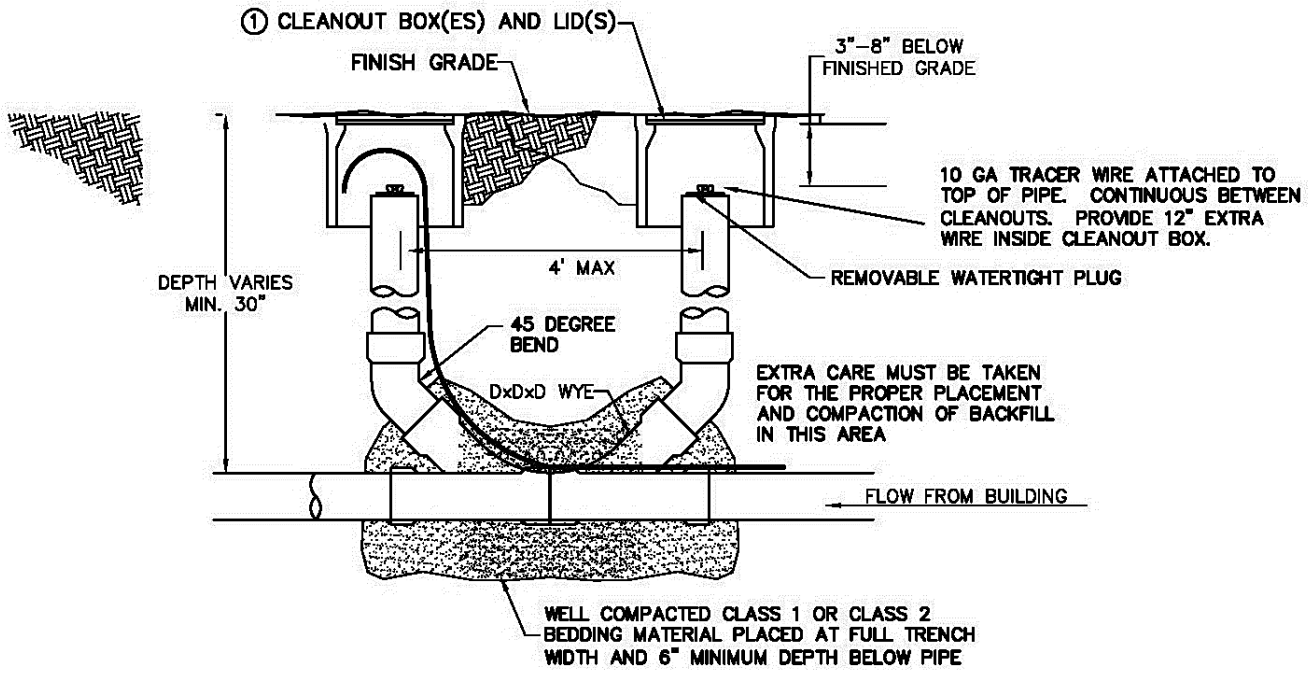
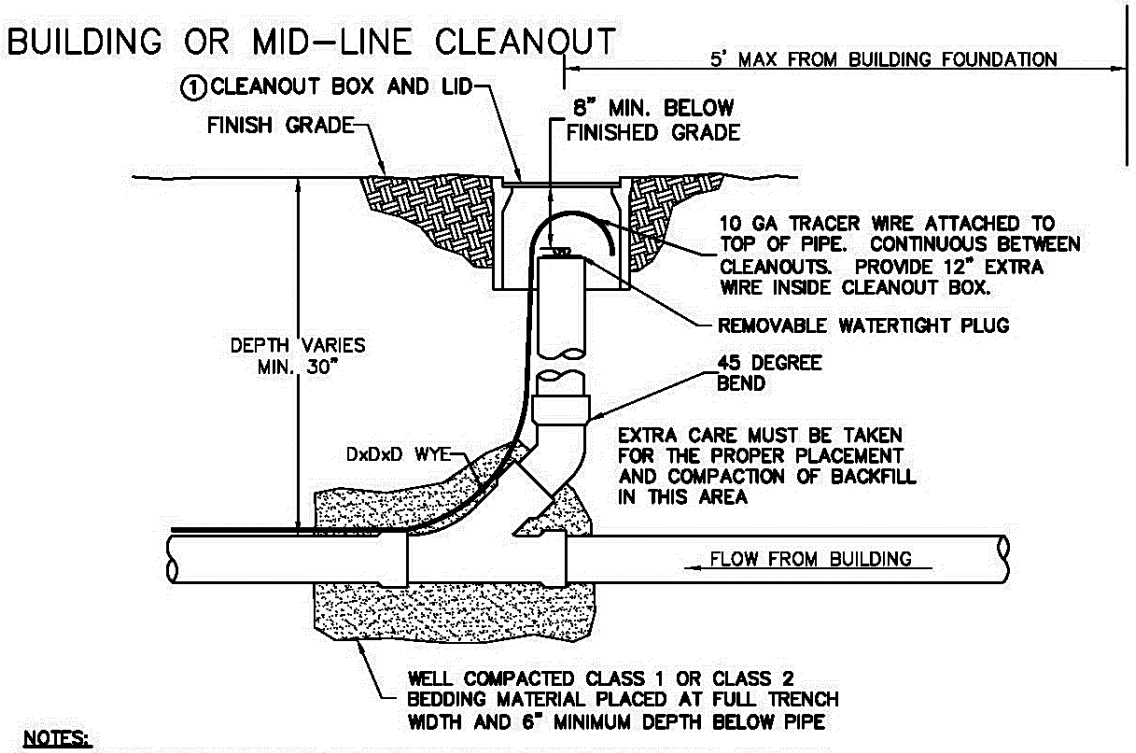
PROPERTY LINE TWO–WAY CLEANOUT



BUILDING OR MID–LINE CLEANOUT



NOTES:

① ALL CLEANOUT BOXES WILL BE TRAFFIC RATED, MADE OF CONCRETE AND STEEL WITH CAST IRON LIDS THAT READ "SEWER". A SINGLE LARGE BOX OR TWO SMALL BOXES MAY BE USED FOR THE PROPERTY LINE TWO–WAY CLEANOUTS.

Scale: NTS

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Ordinance 1–2021: TSD Code Book Standard Drawings

Alternate Lateral Cleanout Assembly

Figure 10A

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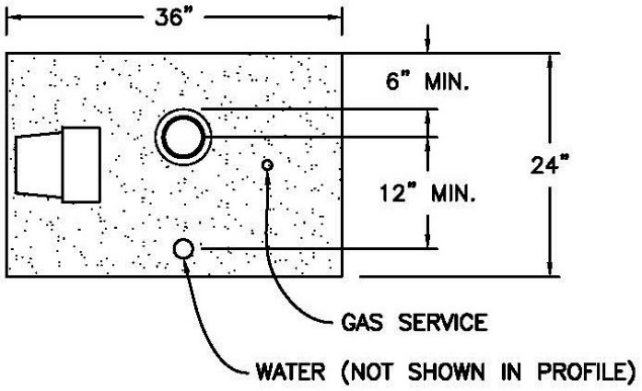
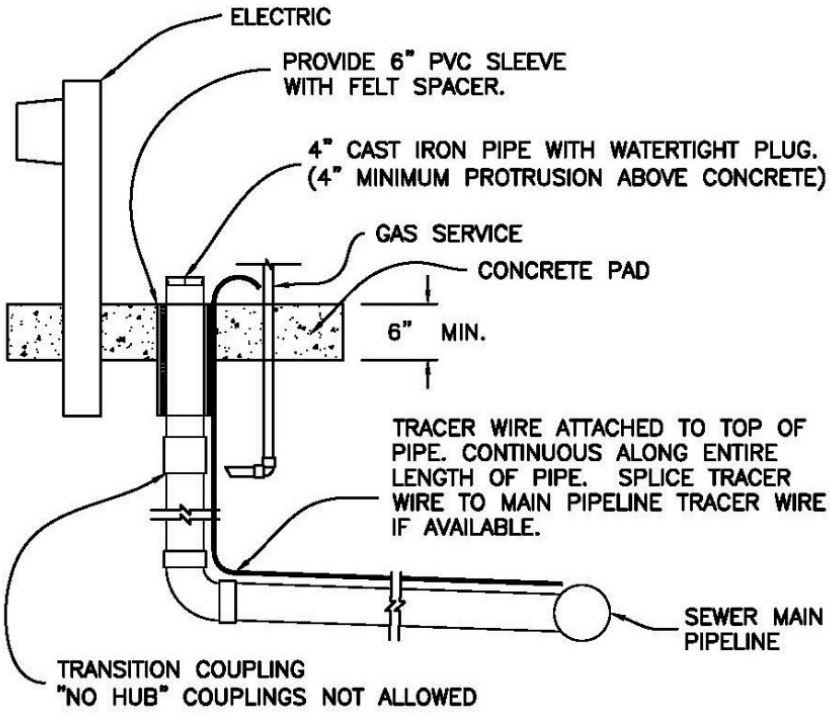


PLAN VIEW



PROFILE VIEW

Scale: NTS

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A PUBLIC AGENCY

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Ordinance 1–2021: TSD Code Book Standard Drawings

Utility Pad Installation

Figure 11

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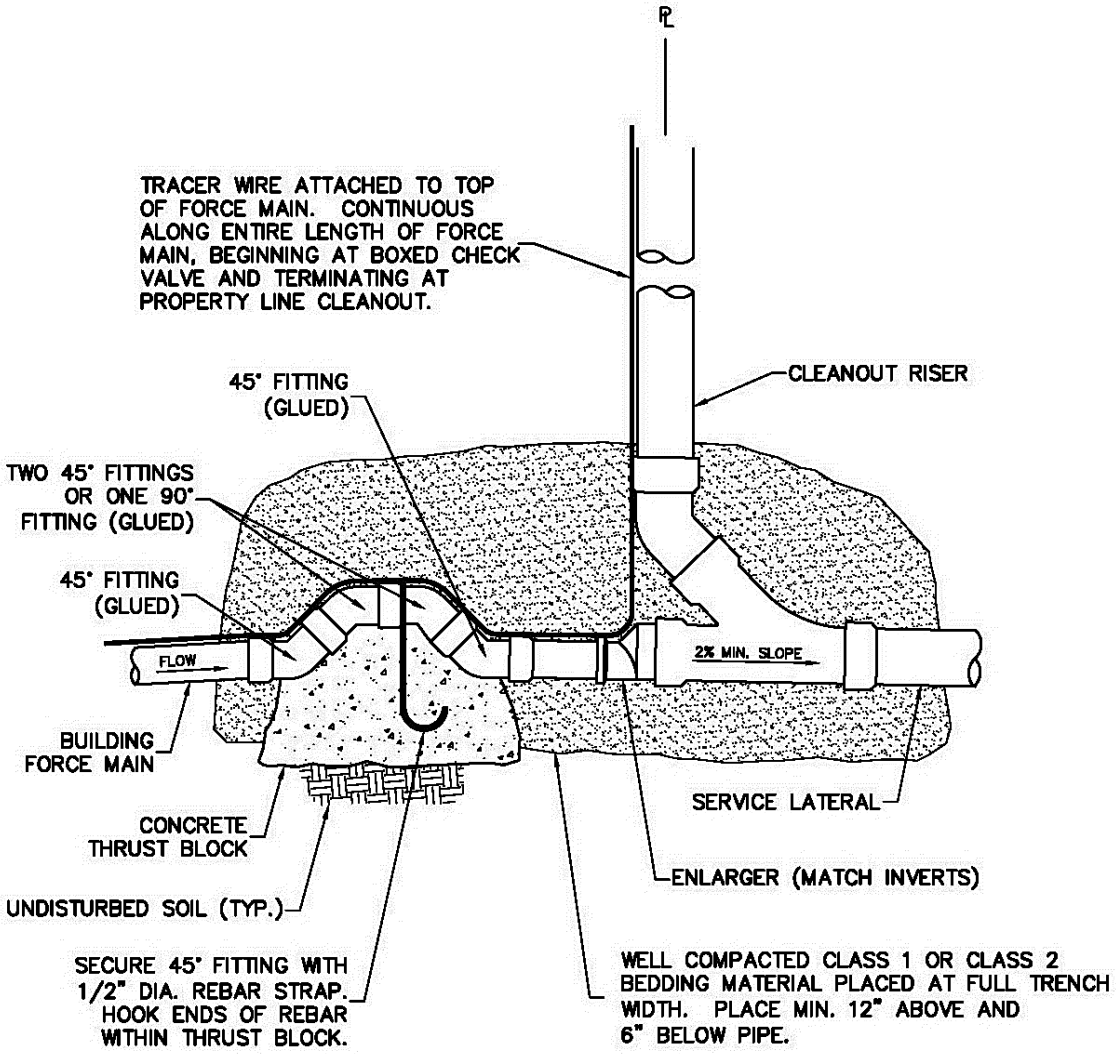

PROFILE

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Force Main Detail (siphon break at property line)

Figure 12

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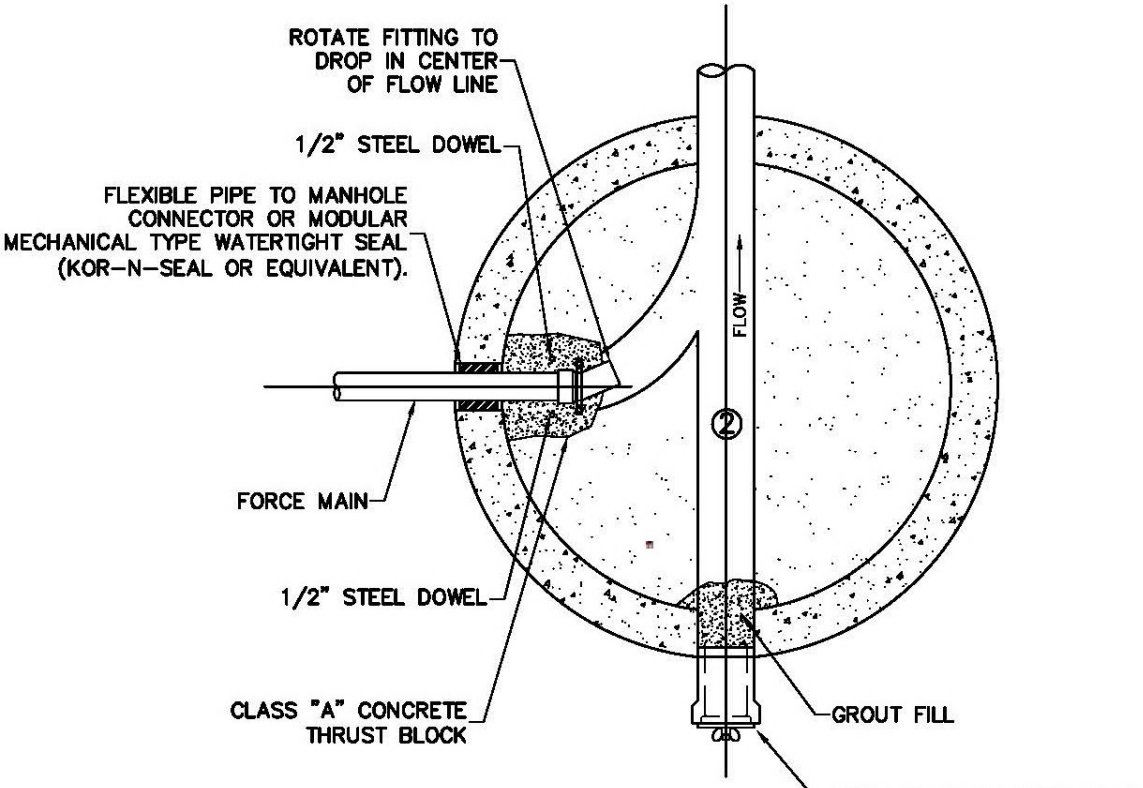

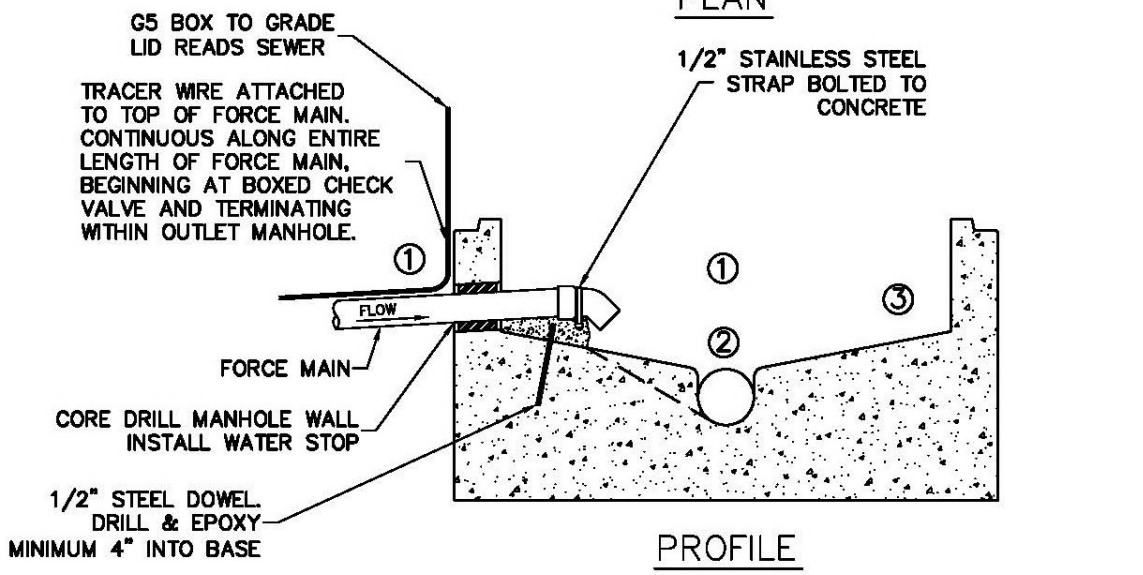

NOTES:

① DISCHARGE OF FORCE MAIN SHALL BE TO A DEDICATED MANHOLE. NO OTHER DISCHARGES SHALL BE ALLOWED IN MANHOLE.

② MANHOLES MUST PROVIDE A MINMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE CAMERA.

③ ALL INTERIOR CONCRETE SURFACES OF MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE FURNISHED WITH A CORROSIONS RESISTANT EPOXY COATING. CEILCOTE 664, OR APPROVED EQUAL.A

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Force Main Detail (siphon break at manhole)

Figure 13

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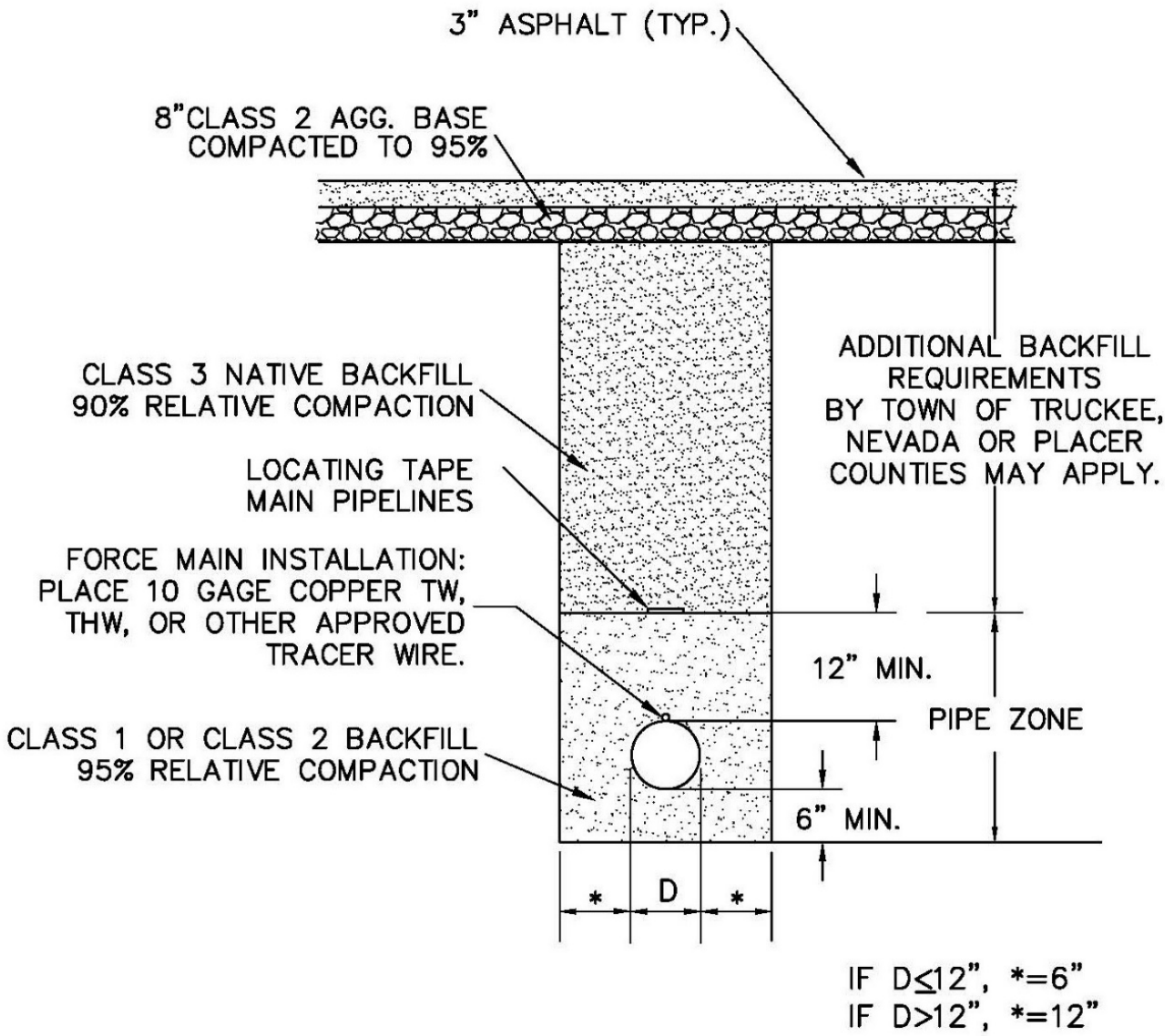

NOTES:

1. ALL SEWAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS.
2. D = PIPE DIAMETER.
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDER", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.

Scale: NTS

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(530)587-3804

Ordinance 1–2021: TSD Code Book Standard Drawings

Typical Sewer Trench (paved - new road construction)

Figure 14

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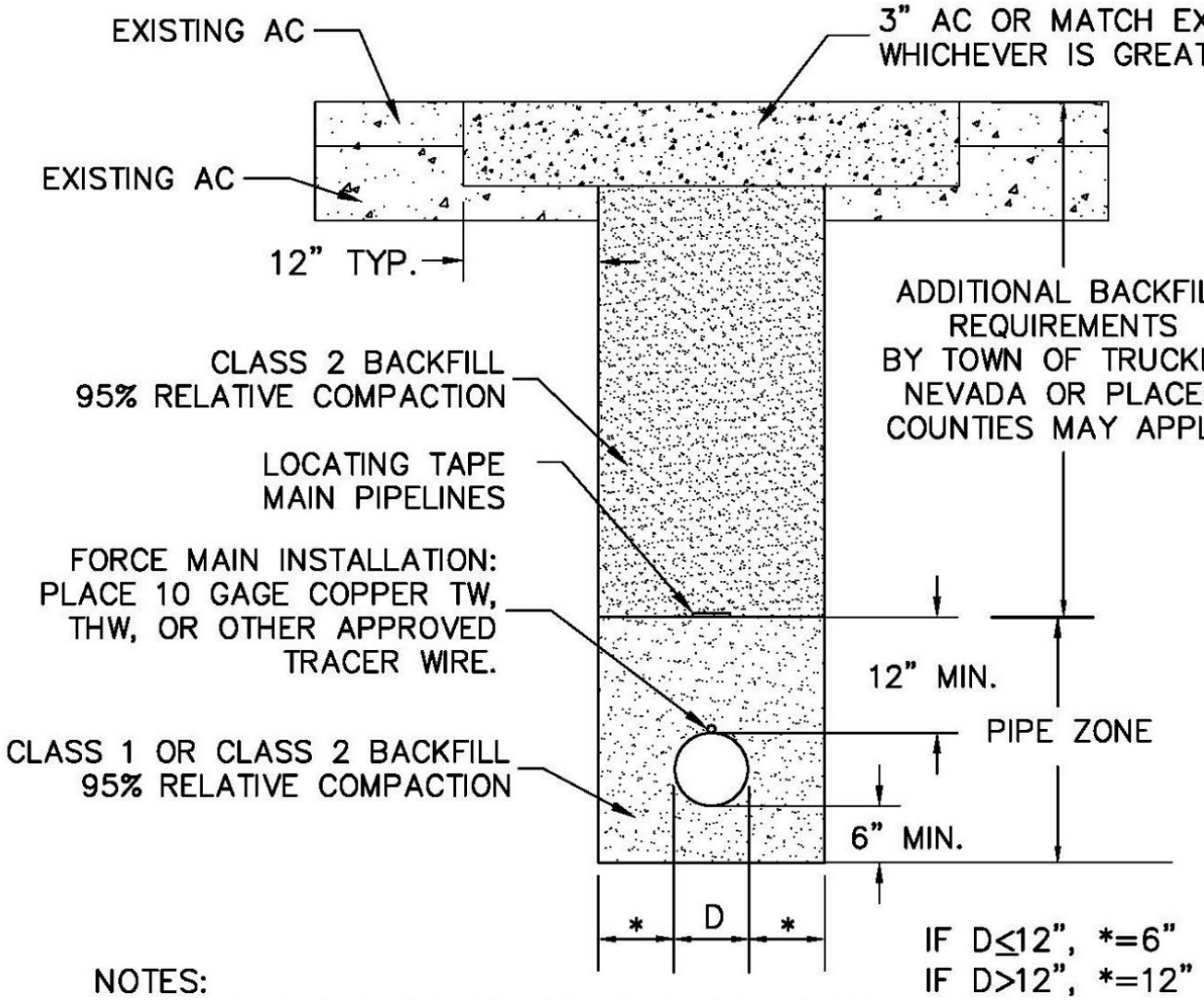

NOTES:

1. ALL SEWERAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS
2. D = PIPE DIAMETER
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDERS", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.
4. SAWCUT OR GRIND EX. PAVEMENT A MINIMUM OF ONE (1) FOOT BEYOND EACH SIDE OF THE LONGITUDINAL OR TRANSVERSE EXCAVATION.

Scale: NTS

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Ordinance 1–2021: TSD Code Book Standard Drawings

Typical Sewer Trench (paved - existing roadway)

Figure 15

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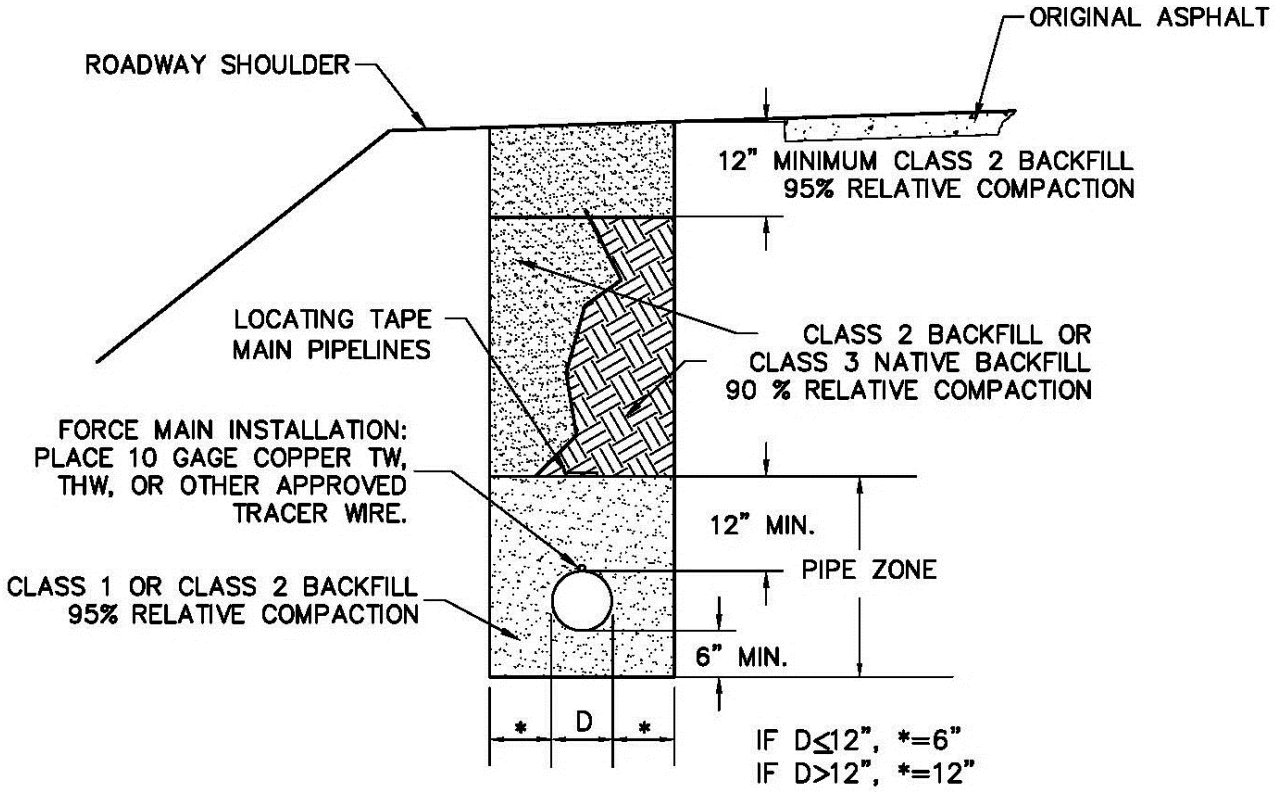

NOTES:

1. ALL SEWERAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS
2. D = PIPE DIAMETER
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDERS", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.
4. ROADWAY SHOULDERS SHALL BE CONSIDERED VEHICLE TRAFFIC AREA AND ARE SUBJECT TO THE PIPELINE REQUIREMENTS OF APPENDIX A–5

Scale: NTS

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Ordinance 1–2021: TSD Code Book Standard Drawings

Typical Sewer Trench (off shoulder)

Figure 16

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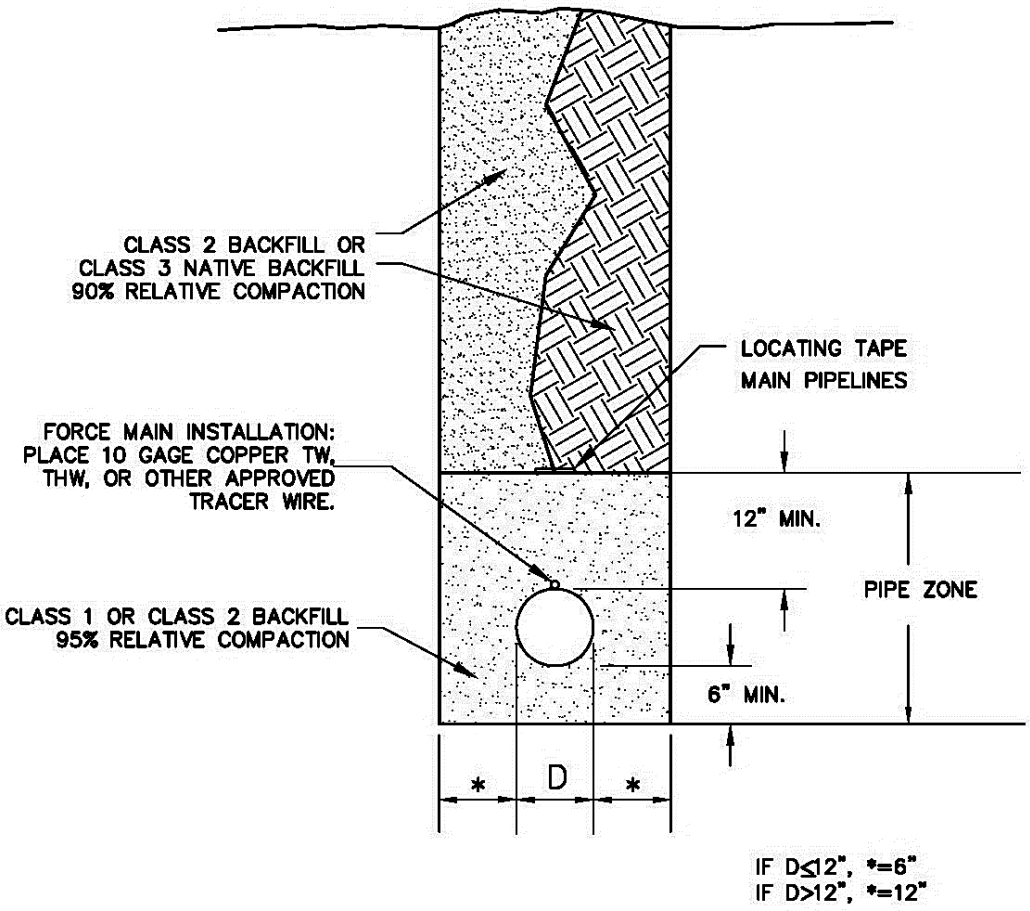

NOTES:
1. ALL SEWAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS.
2. D = PIPE DIAMETER.
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDER", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Typical Sewer Trench (non traffic areas)

Figure 17

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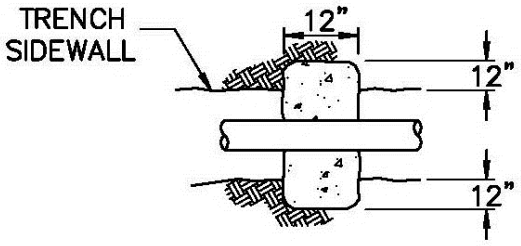
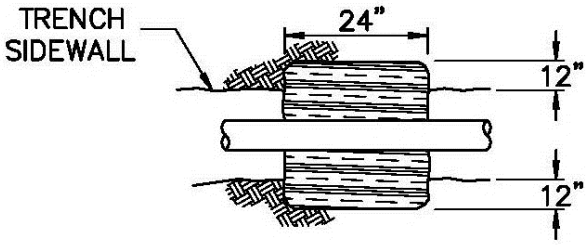
1 SACK CEMENT SLURRY
OR CONCRETE BAGS

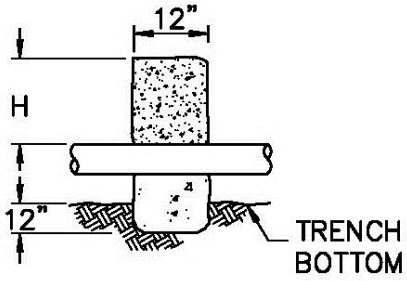


PLAN VIEW

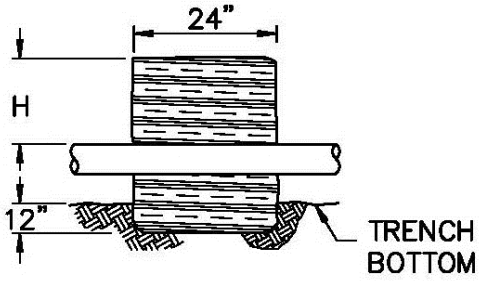
BENTONITE CLAY



PLAN VIEW



PROFILE VIEW



PROFILE VIEW

H = 12" ABOVE SEASONAL HIGH
GROUNDWATER TABLE (36" MIN.)

Scale: NTS

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Ordinance 1–2021: TSD Code Book Standard Drawings

Trench Cut-Off Blocks

Figure 18

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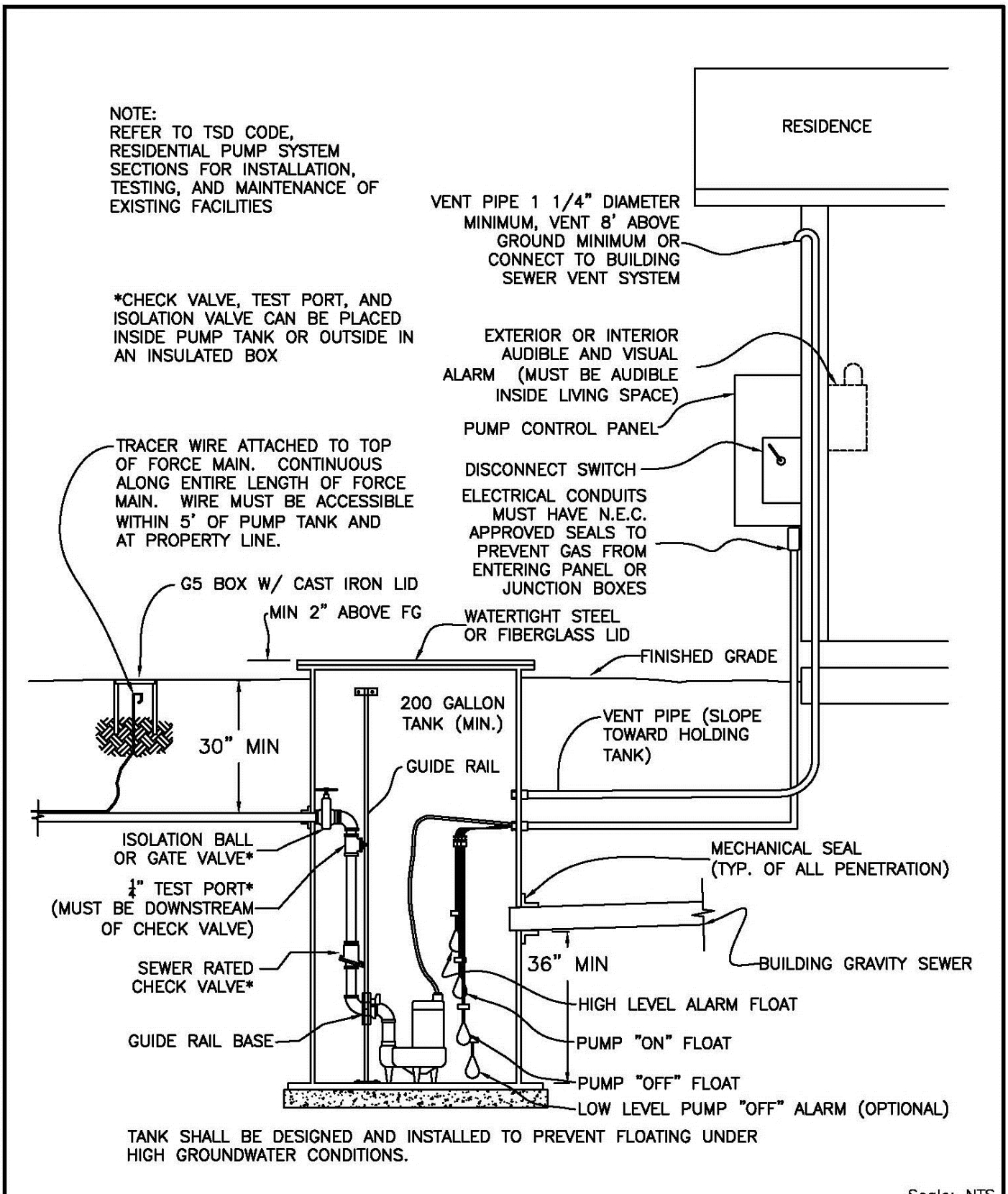

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Residential & Small Commercial Pump Station

Figure 19

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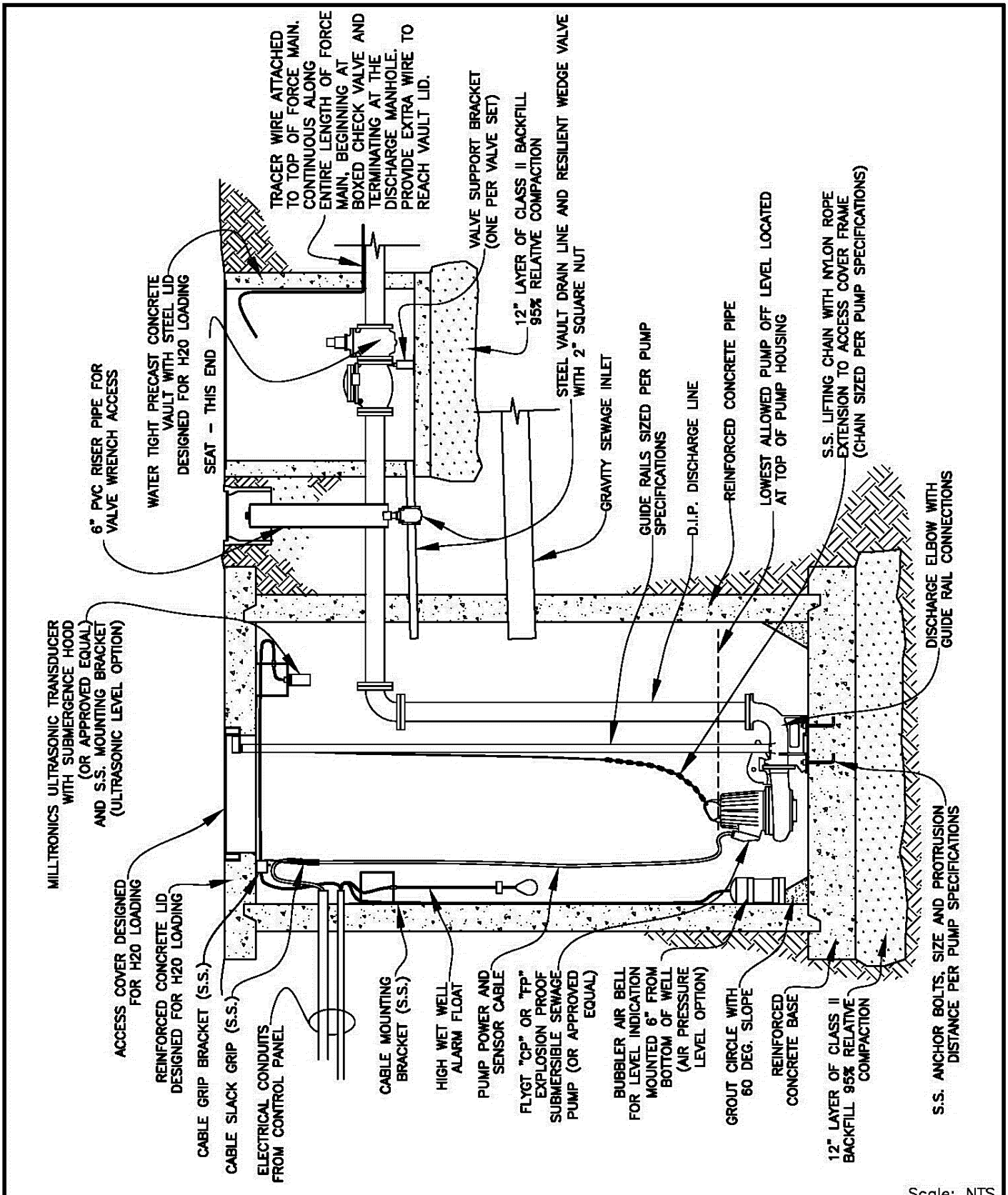

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Submersible Pump Station (section view)

Figure 20

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GENERAL NOTES

1) WETWELL SHALL BE CLASSIFIED AS A CLASS I DIVISION I GROUPS C & D HAZARDOUS LOCATION. ALL EQUIPMENT INSIDE THE WET WELL AND ALL CONDUITS CONNECTED TO THE WET WELL SHALL BE APPROVED AND INSTALLED FOR THIS HAZARDOUS CLASSIFICATION.
2) ALL HARDWARE AND MOUNTING BRACKETS IN THE WETWELL SHALL BE STAINLESS STEEL.
3) ALL CONCRETE WET WELL AND VALVE BOX PIECES SHALL BE REBAR REINFORCED AND DESIGNED FOR H20 LOADING. ALL CONCRETE JOINTS SHALL BE CLEANED, AND THEN SEALED WITH RAMNEK PRIMER AND RAMNEK OR AN APPROVED EQUAL. THE WET WELL INTERIOR SHALL BE COATED WITH AT LEAST TWO COATS OF CARBOGUARD 692/691 CONCRETE SEALANT OR AN APPROVED EQUAL. IN AREAS WITH HIGH GROUND WATER THE WET WELL EXTERIOR SHALL BE COATED IN ACCORDANCE WITH EXTERNAL MANHOLE/VAULT SEALS SPECIFICATIONS IN SECTION A-6.
4) BUBBLER CONTROLS MAY BE SUBSTITUTED WITH ULTRASONIC CONTROLS UPON APPROVAL.
5) ALL PIPE OR CONDUIT PENETRATIONS THROUGH WET WELL OR VAULT SHALL BE SEALED WATERTIGHT WITH MECHANICAL TYPE SEALS (LINK SEAL OR EQUIVALENT) OR RAMNEK AND PRIMER, THEN GROUTED WITH NON SHRINK GROUT.
6) THRUST BLOCKS SHALL BE PLACED AT EACH FORCE MAIN BEND OR FITTING THAT CHANGES THE FLOW DIRECTION OR VELOCITY.
7) DISCHARGE PIPING IN WET WELL AND THROUGHOUT THE VALVES SHALL BE FLANGED DUCTILE IRON. WHEN SPOOLS CONSIST OF FIELD FLANGES, CONSIDERATION SHALL BE MADE FOR UNSUPPORTED FITTINGS AND SPOOLS BY USING RESTRAINED FLANGE ADAPTERS.
8) DISCHARGE PIPING SHALL HAVE A TRACER WIRE ATTACHED TO THE TOP OF THE PIPE. TRACER WIRE SHALL BE SECURED TO THE PIPE AT APPROPRIATE INTERVALS AND SHALL BE CONTINUOUS BETWEEN VAULTS AND OTHER ACCESS POINTS.

Scale: NTS

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Ordinance 1–2021: TSD Code Book Standard Drawings

Submersible Pump Station (plan view)

Figure 21

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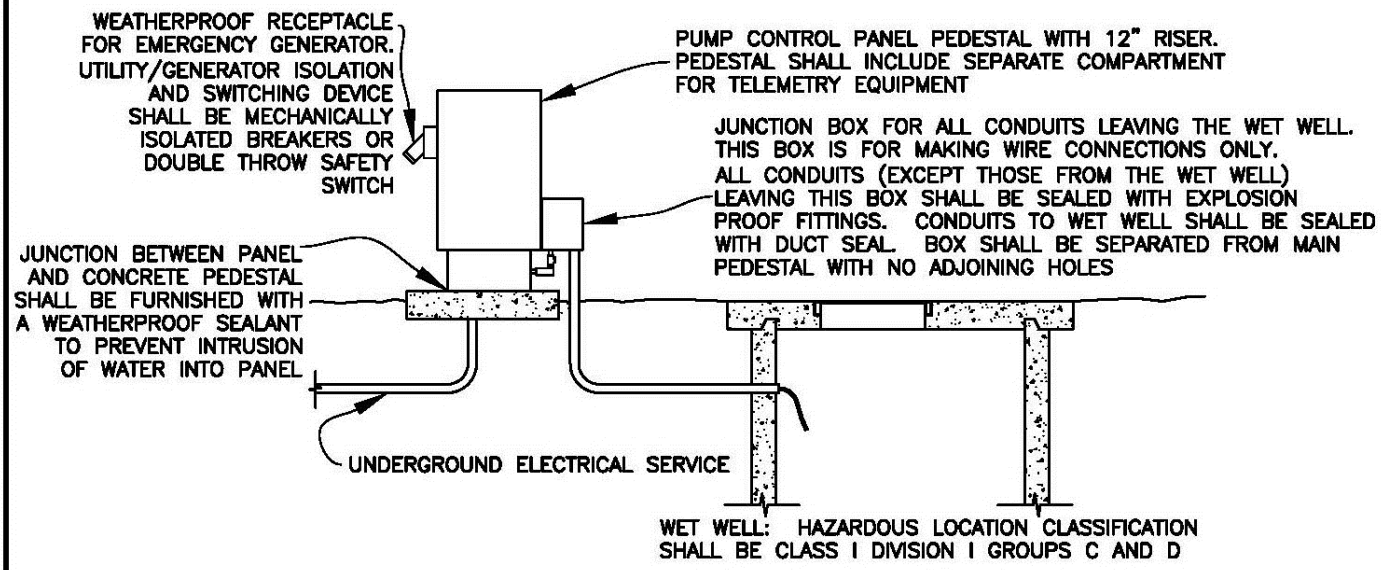
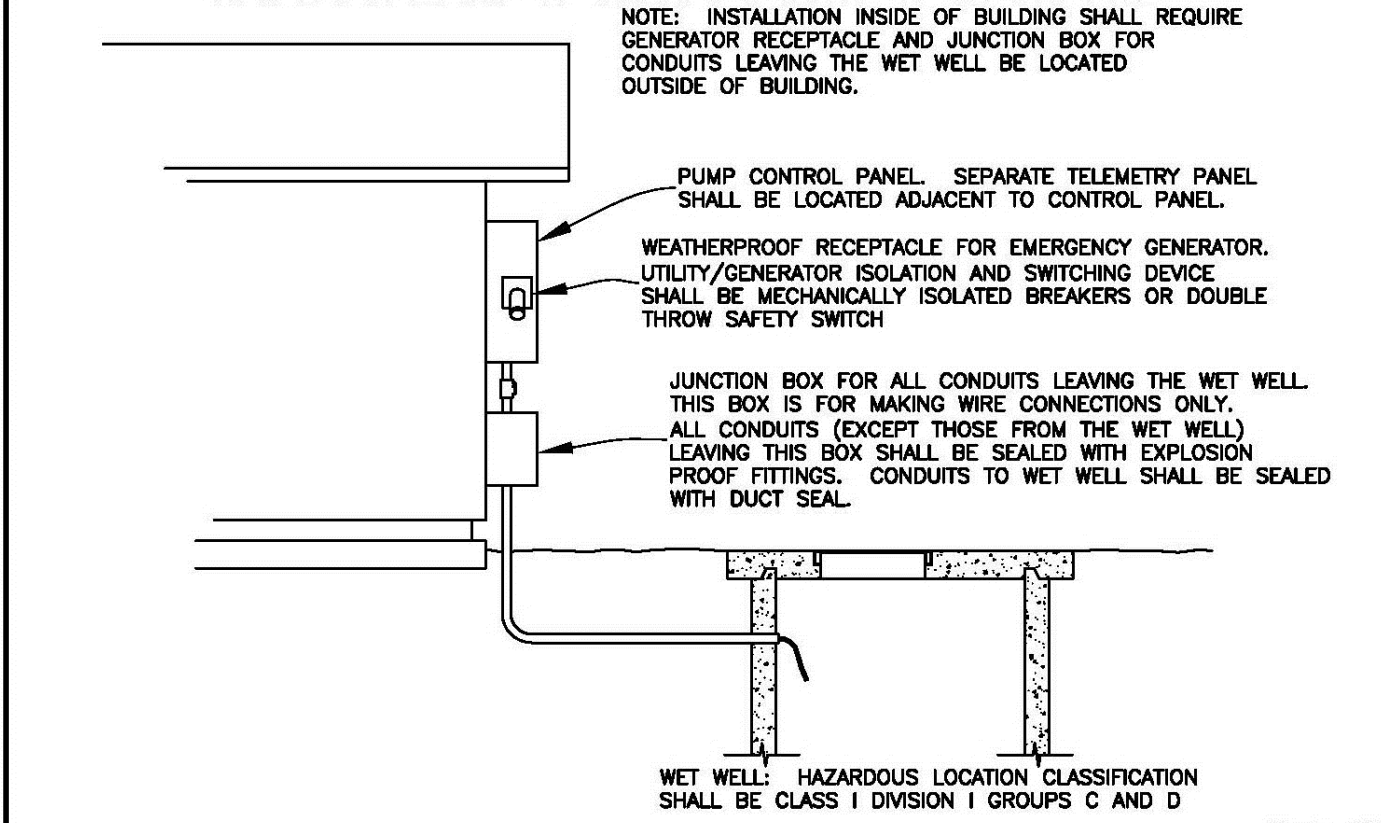
TYPICAL INSTALLATION WITH SERVICE/CONTROL PEDESTAL



TYPICAL INSTALLATION ON BUILDING EXTERIOR OR SERVICE POLE



Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Submersible Pump Station (electrical)

Figure 22

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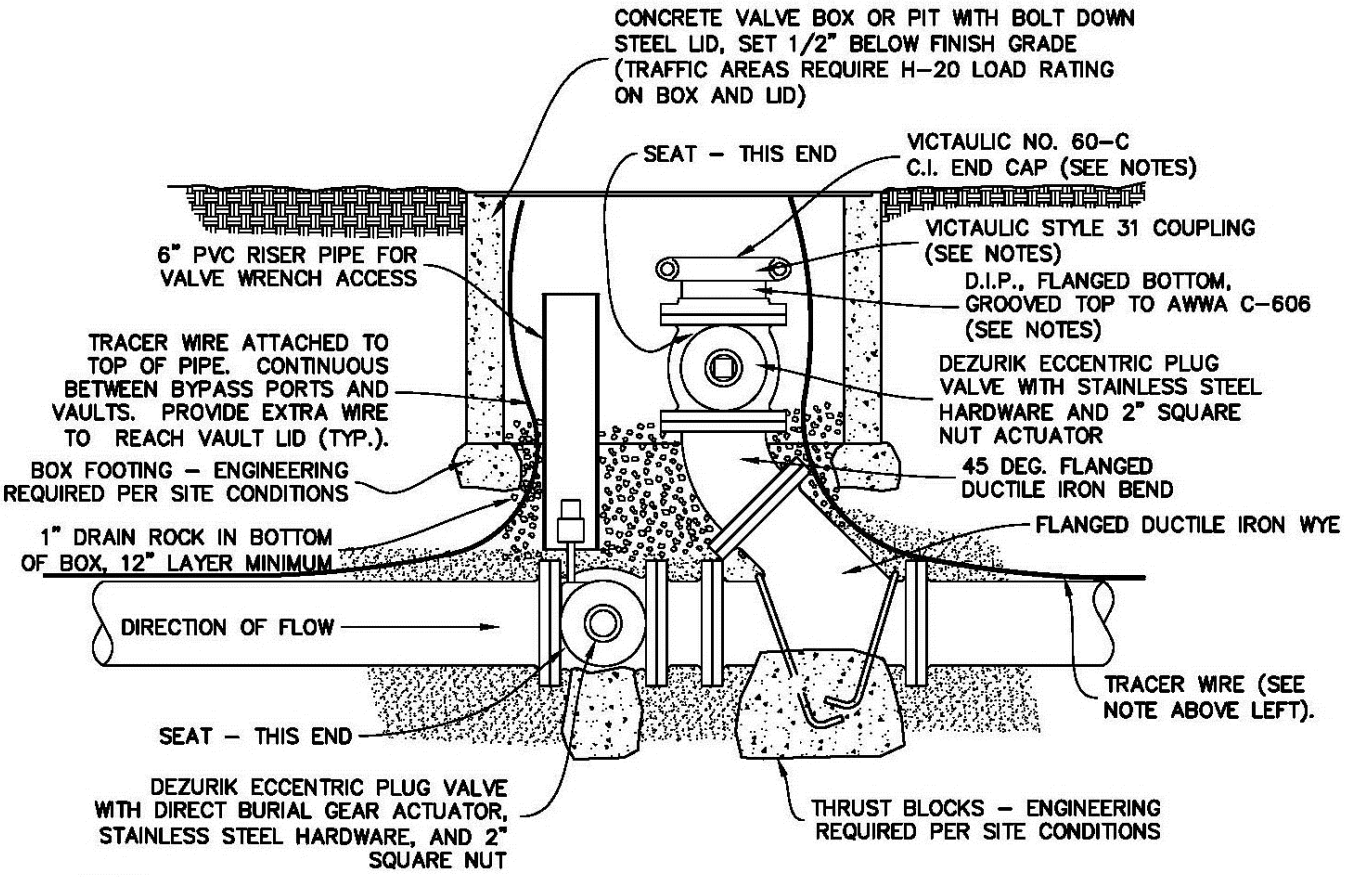

NOTES:

1) BOX FOOTING REQUIRED PER SOIL CONDITIONS. TRAFFIC AREAS REQUIRE FOOTINGS TO SUPPORT H-20 RATED BOX.
2) VALVES AND FITTINGS TO BE SIZED EQUAL TO FORCE MAIN SIZE FOR FORCE MAINS LESS THAN OR EQUAL TO 8" DIAMETER.
3) GROOVED TOP RISER, GROOVED CAP, AND VICTAULIC COUPLING SHALL BE AWWA C.I./D.I. DIMENSIONS FOR 8" PORTS OR LARGER. SMALLER PORT SIZES SHALL HAVE STANDARD I.P.S. DIMENSIONS ON GROOVED RISER, CAP, AND COUPLING.
4) GEAR ACTUATOR MAY BE SUBSTITUTED WITH STANDARD 2" SQUARE NUT ON BURIED PLUG VALVE FOR 4" BYPASS PORTS ONLY.
5) ALL FLANGES TO BE RATED FOR APPROPRIATE PRESSURE CLASS AS DICTATED BY FORCE MAIN DESIGN PRESSURES. CLASS 125 MINIMUM.
6) ALL HARDWARE, INCLUDING VALVE HARDWARE, SHALL BE STAINLESS STEEL
7) BOX SHALL BE SIZED SO AS TO ALLOW SUFFICIENT WORKING ACCESS TO ACTUATORS AND COUPLINGS. SIZE SHALL BE DETERMINED PER SITE CONDITIONS AND APPROVED BY THE DISTRICT
8) PORT HEIGHT SHALL BE DETERMINED PER SITE CONDITIONS AND APPROVED BY THE DISTRICT

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Bypass Port (single)

Figure 23

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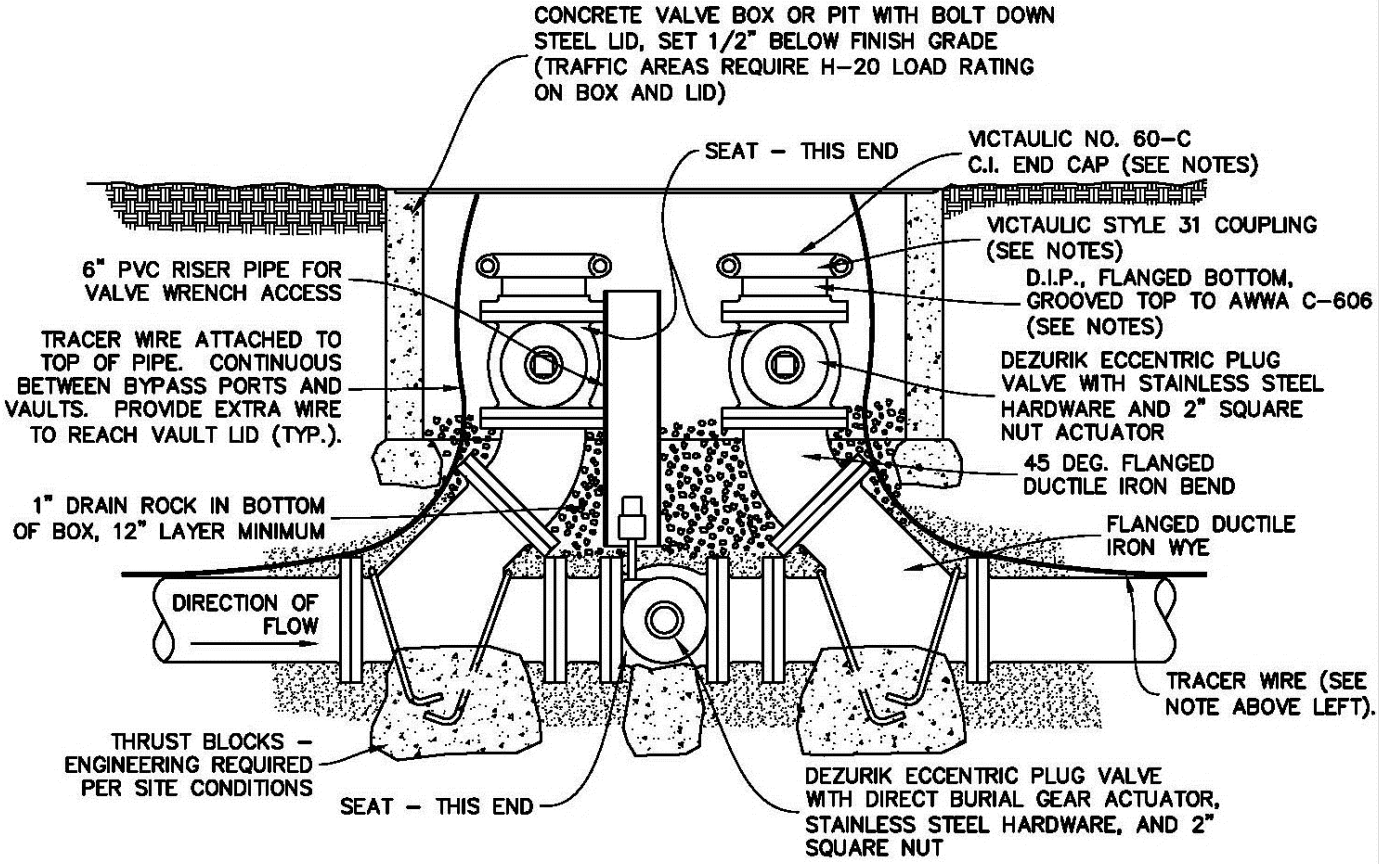

NOTES:

1) BOX FOOTING REQUIRED PER SOIL CONDITIONS. TRAFFIC AREAS REQUIRE FOOTINGS TO SUPPORT H-20 RATED BOX.
2) VALVES AND FITTINGS TO BE SIZED EQUAL TO FORCE MAIN SIZE FOR FORCE MAINS LESS THAN OR EQUAL TO 8" DIAMETER.
3) GROOVED TOP RISER, GROOVED CAP, AND VICTAULIC COUPLING SHALL BE AWWA C.I./D.I. DIMENSIONS FOR 8" PORTS OR LARGER. SMALLER PORT SIZES SHALL HAVE STANDARD I.P.S. DIMENSIONS ON GROOVED RISER, CAP, AND COUPLING.
4) GEAR ACTUATOR MAY BE SUBSTITUTED WITH STANDARD 2" SQUARE NUT ON BURIED PLUG VALVE FOR 4" BYPASS PORTS ONLY.
5) ALL FLANGES TO BE RATED FOR APPROPRIATE PRESSURE CLASS AS DICTATED BY FORCE MAIN DESIGN PRESSURES. CLASS 125 MINIMUM.
6) ALL HARDWARE, INCLUDING VALVE HARDWARE, SHALL BE STAINLESS STEEL
7) BOX SHALL BE SIZED SO AS TO ALLOW SUFFICIENT WORKING ACCESS TO ACTUATORS AND COUPLINGS. SIZE SHALL BE DETERMINED PER SITE CONDITIONS AND APPROVED BY THE DISTRICT
8) PORT HEIGHT SHALL BE DETERMINED PER SITE CONDITIONS AND APPROVED BY THE DISTRICT

Scale: NTS

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(530)587-3804

Ordinance 1-2021: TSD Code Book Standard Drawings

Bypass Port (double)

Figure 24

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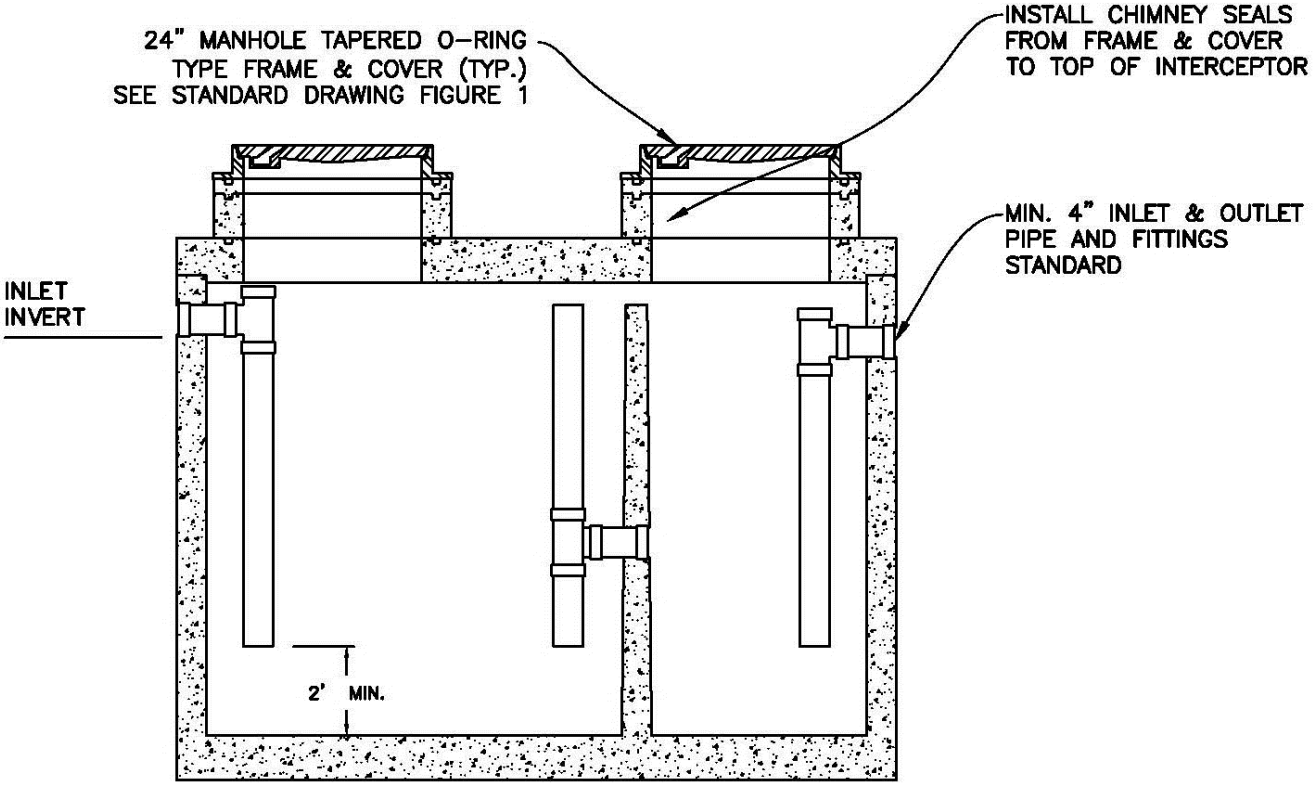
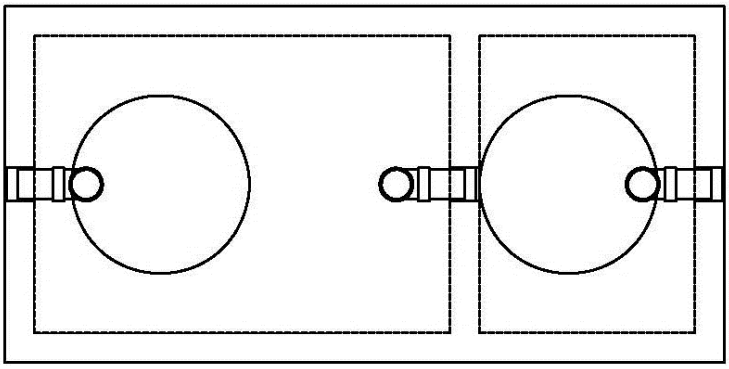


SIDE VIEW



TOP VIEW
(COVERS & RISERS REMOVED)

LIQUID CAPACITY: UPC REQUIREMENTS (MINIMUM 750 GALLONS)
VAULT DESIGN LOAD: H-20 TRAFFIC LOADING

MINIMUM 3" VERTICAL DIFFERENTIAL BETWEEN INLET & OUTLET APPLY RAMNEK PRIMER & SEALANT TO BOTH SURFACES AT ALL JOINTS

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Grease Interceptor

Figure 25

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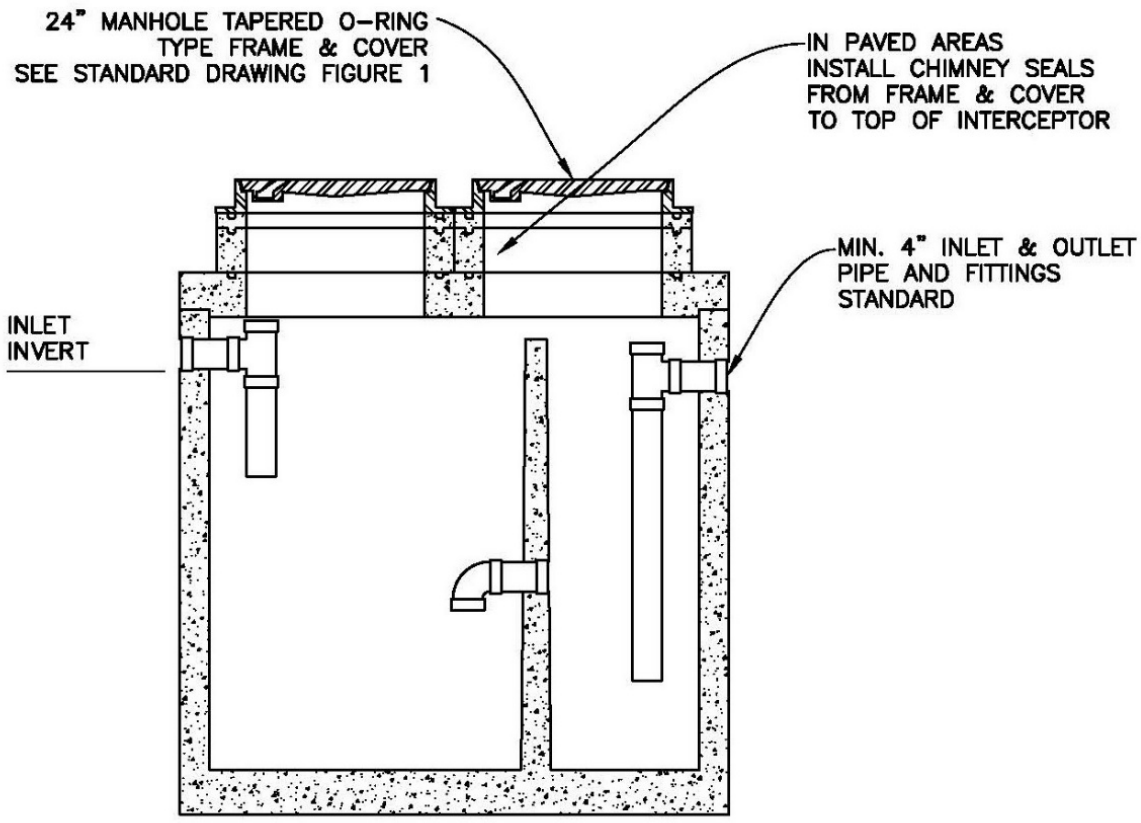

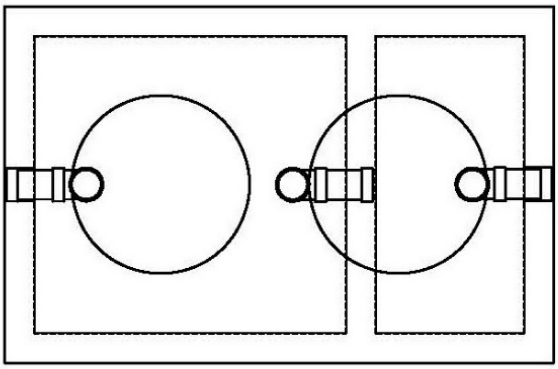

TOP VIEW
(COVERS & RISERS REMOVED)

LIQUID CAPACITY: MINIMUM 500 GALLONS
VAULT DESIGN LOAD: H-20 TRAFFIC LOADING

MINIMUM 3" VERTICAL DIFFERENTIAL BETWEEN INLET & OUTLET APPLY
RAMNEK PRIMER & SEALANT TO BOTH SURFACES AT ALL JOINTS

Scale: NTS

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Ordinance 1-2021: TSD Code Book Standard Drawings

Sand/Oil Interceptor

Figure 26

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DEFINITIONS AND ABBREVIATIONS

Definitions

The following definitions shall apply to all District work:

ACCESSORY DWELLING UNIT (ADU): An attached or detached residential dwelling unit located on a parcel with a proposed or existing primary single-family dwelling or a multi-family dwelling which provides complete independent living facilities for one or more persons and includes permanent provisions for living, sleeping, eating, cooking and sanitation. The total floor space area does not exceed 50% of the primary dwelling living area for an attached accessory dwelling unit or does not exceed 1,200 square feet for a detached dwelling unit. ADUs are considered residential units for the purpose of connection and user fees. Newly constructed ADUs that do not increase the living area of a property shall be exempt from connection fees.

AGENCY: Any political subdivision of the State of California acting as a body in accordance with the appropriate enabling legislation.

AGENT: Any individual, corporation, partnership or other legal entity representing the interests of the owner.

APPLICANT: An individual, agent, owner or agency making application for permission to connect and to make use of the District's sanitary sewer facilities.

BANQUET FACILITIES: A designated area which is occasionally used by commercial establishments for restaurant seating for groups of customers in addition to the regularly used restaurant seating. The District factor rating for banquet facilities is based upon the maximum number of seats used on the property at any one time. These banquet seats are charged 35 percent of a restaurant seat. Banquet seating shall not be used in the day to day operation of a restaurant; or for more than 50 percent of the time; or for non-banquet purposes. Seats which do not meet the criteria for banquet seats shall be rated as restaurant seats.

BAR SINK: A single square or rectangular sink which does not exceed 15 inches in length or width, and 7 inches in depth; or a round sink which does not exceed 15 inches in diameter. It shall not be the primary sink in a residential unit. If a bar sink is installed in a room which is not made available for rental purposes and does not have a kitchen, kitchenette, or any cooking facilities, and which is located within a residential unit which already contains a kitchen sink, there will be no connection fees or user fees assessed for the room.

BENCH SEATING: In an establishment which is rated according to the number of seats, 20 inches of benching will be considered as one seat. Each bench will be counted in increments of 20 inches. Fractional seats will not be charged.

BOOTH SEATING: In an establishment which is rated according to the number of seats, 24 inches of booth seating will be considered as one seat. The booth seat will be counted in increments of 24 inches. Fractional seats will not be charged.

BOARD: The Board of Directors of the Truckee Sanitary District.

BUILDING: Any structure used for human habitation, employment or place of business, recreation or other purpose, containing sanitary facilities.

BUILDING LATERAL: The sanitary sewer waste pipeline extending from the outside of the building foundation to the service lateral connection point (usually located at the property line). The cleanout at the service lateral connection point (usually the property line cleanout) is part of the building lateral.

CLEANOUT: A sealed aperture permitting access to a sanitary sewer pipeline for cleaning purposes.

COMMERCIAL ESTABLISHMENT: Any building use other than a residential unit as defined in the District Code, or a building used for manufacturing.

CONFERENCE FACILITIES: Facilities which are only used for conducting conferences intermittently throughout the year by groups of people which may vary significantly in number. The factor rating for these facilities is based upon the number of plumbing fixture units in the area used exclusively by the fore-mentioned groups and are generally rated at the public rate.

CONNECTION FEE: An amount of money charged for connection to the District sanitary sewer system pursuant to the District Code. This includes connection fees charged for any increase in factor rating as listed in Appendix A-4. Fixture Unit Equivalents may be amended from time to time, as a result of remodeling, additional building on property, change in usage of the property, or other change in appearance or operations.

CONTRACTOR: The person, firm, partnership, association, corporation or organization, either singular or plural, which is constructing any work authorized to be performed by improvement plans and specifications and approved by the District. The aforementioned entities may act either directly, or through properly authorized agents acting within the scope of the particular duties delegated to them.

COUNTY: The Counties of Nevada or Placer in the State of California, represented by the Director of Public Works acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

CUSTOMER: Any person describe herein who receives wastewater service from or discharges wastewater into the District sanitary sewer system.

DEVELOPER: The person, firm, partnership, association, corporation or organization, either singular or plural, which is having constructed any work which is authorized to be performed by improvement plans, and specifications and approved by the District. The aforementioned entities may act, either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

DISTRICT: The Truckee Sanitary District

DISTRICT DEVELOPMENT GUIDELINES: There are specific administrative requirements for developments and projects which involve the installation of sewer facilities. The District has

produced a "Development Guidelines" packet to assist you. A "Development Guidelines" packet may be picked up at the District office.

DISTRICT ENGINEER: Engineer retained by the District, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

DISTRICT SANITARY SEWER FACILITIES: The system of pipelines, manholes, cleanouts, pump stations, interceptors, and/or related appurtenances, under the jurisdiction of the District, that carry liquid and waterborne waste from residential, commercial, or industrial facilities to the Tahoe-Truckee Sanitation Agency (T-TSA) for final treatment and disposal.

DWELLING UNIT: A living unit with kitchen facilities, including those in accessory dwelling units, multiple dwellings, apartment, motels, hotels, mobile homes, trailers, condominiums or townhouses.

EFFLUENT: Treated wastewater flowing from a processing plant, or related facility.

ENGINEER: The person, firm, partnership, association, corporation or organization, either singular or plural, specifically appointed to prepare improvement plans and specifications, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

EQUIVALENT DWELLING UNIT: (EDU) A single family residential unit. Based on the occupancy of 2.3 persons per single family residence, producing 100 gallons of wastewater per person per day. One EDU is equal to 230 gallons of wastewater per day.

FACTOR RATING: The number of plumbing fixtures in a commercial establishment related to plumbing fixture unit equivalents in Appendix A-4 and correlated to the District User Fee Schedule, Appendix A-3.

FIXTURE UNITS: Plumbing fixture unit equivalent load values for drainage piping and plumbing, as specified in the District Code, the applicable Uniform Plumbing Code or the California State plumbing laws and administrative rules.

FORCE MAIN: A pressure pipe joining the pump discharge at a water or wastewater pumping station with a point of gravity flow.

GARBAGE: All animal and vegetable wastes from the preparation, cooking and dispensing of food, or the commercial and industrial processing thereof.

GENERAL MANAGER: The Manager of the Truckee Sanitary District

GREASE INTERCEPTOR/TRAP: A device, or structure and storage reservoir, acceptable to the District, which provides for the separation and storage of wastewater with a specific gravity of less than 1.0 and prevents said light wastewater from entering the sanitary sewer system.

GUEST HOUSE: A space to be used by members of the family occupying the main dwelling and their non-payment guest, without a kitchen or cooking facilities and containing less than 500 square feet of floor area. All utilities serving the guest house, such as water, sewer, electricity and gas shall be common to, dependent on and associated with the main dwelling. Allowable plumbing shall be limited to that required for a single bathroom. There shall be a limit of one

guest house per parcel. The guest house must be further covered with a deed restriction or appropriate covenant approved by the District prohibiting the separate sale of the unit and/or independent rental of the unit.

HAIR SALON TYPE 1: An establishment whose primary purpose is washing, cutting, and styling hair, and where color tints or dyes are not used and permanent waves are not usually given.

HAIR SALON TYPE 2: An establishment whose primary purpose is washing, cutting, and styling hair, and where color tints or dyes are used and/or permanent waves may be given.

INDUSTRIAL WASTE: Any liquid, gaseous, radioactive or solid waste substance or a combination thereof, resulting from any process of industry or manufacturing, or from the development or recovery of any natural resources.

INSPECTION: The act of reviewing any/or all sewer construction work for the purpose of determining compliance with the District Code.

INSPECTOR: A District representative, acting within the scope of their designated authority, who shall inspect commercial establishments in order to count the fixture units to determine the factor rating to be charged to the property. Also review any or all construction work for the purposes of determining compliance with the District Code.

KITCHEN FACILITIES: Any kitchen sink(s), kitchen sink with garbage disposal, kitchenette, or cooking facilities.

LABORATORY: Any testing agency or testing firm which has been approved by the Board of Directors of the Truckee Sanitary District.

LICENSED CONTRACTOR: A contractor having a valid license issued pursuant to Chapter 9, Division 3, of the Business and Professions Code, State of California, which license includes the activities applied for and permitted.

LIVING UNIT: A structure or portion of a structure used for human habitation that contains sanitary facilities; shall be equivalent to a Dwelling.

LOT: Any piece or parcel of land bounded, defined, or shown upon a map or deed, recorded or filed in the office of the County Recorder.

MOTEL UNIT/HOTEL UNIT: (Also includes Bed & Breakfast establishments) Shall mean each guest room in a motel or hotel which is made available for use, rental or hire for the purpose of furnishing transient living accommodations on a day-to-day basis.

MULTIPLE USES: When restrooms are shared by both restaurant patrons and other business patrons (as they are in some major ski areas, for example), and where restrooms are not located in the restaurant and are not provided solely for the use of restaurant patrons, the formula detailed on Appendix A-5 will be applied as a credit against the total of plumbing fixture units which are provided for the use of both restaurant and other business patrons.

NOTICE OF NONCOMPLIANCE: A written notice issued by the District to the owner informing of defective materials, workmanship or procedures which do not conform to District requirements and which must be removed, replaced or remedied.

ORDINANCE: A statute or regulation of the Truckee Sanitary District Board of Directors.

OUTFALL SEWER: A major sewer pipeline which collects wastewater from various sewer main pipelines and conveys it to an interceptor pipeline or pump station.

OWNER: The person, corporation, partnership, or other legal entity which is shown as the owner of a particular lot on the property tax rolls that are maintained by the Counties of Nevada or Placer.

pH: The negative reciprocal of the logarithm of the weight of hydrogen in grams per liter of solution.

PERMIT: Formal authorization required pursuant to this District Code for connection to the sanitary sewer system of the Truckee Sanitary District.

PERMITTEE: The person to whom a permit has been issued pursuant to the provisions of the District Code.

PERSON: The State of California, any individual, public or private corporation, political subdivision, governmental agency, municipality, industry, co-partnership, association, firm, trust, estate or any other legal entity whatsoever.

PLUMBING FIXTURE: Any sink, toilet, shower, tub, floor drain, urinal, drinking fountain, etc., or appliance that collects and/or produces waste flow and introduces it into the sanitary sewer system.

PREMISES: Any lot, or any piece or parcel of land comprising of two or more lots of record in one ownership, or any building or other structure or any part of any building or structure used or useful for human habitation or gathering or for carrying on a business or occupation or any commercial or industrial activity.

PRIVATE SANITARY SEWER FACILITIES: The system of pipelines, manholes, cleanouts, pump stations, interceptors, and/or related appurtenances, ***not operated or maintained by the District***, that carry liquid and waterborne waste from residential, commercial, or industrial facilities to the District's sanitary sewer system.

PRIVATE FIXTURES: Are those which are intended for the use of an individual, or which are limited to the use of the employees of a business or tenants of a commercial building; provided that the number of employees in that business or tenants in that commercial building at any one time does not exceed the ratio of 5 employees or tenants per toilet per restroom.

PUBLIC ENTITY: A city or county, municipal water district, public utility district, sanitary district, sanitation district, county water district, or California water district, organized under the laws of the State of California, or any other public corporation or agency of the State having power to acquire, construct and operate facilities for the collection, treatment and disposal of wastewater, industrial waste and storm water of such entity and its inhabitants.

PUBLIC FIXTURES: Are those which are intended for the use of the employees of a business or tenants of a commercial building when the ratio of employees or tenants per toilet per restroom exceed 5 to 1; or those fixtures in a business which are for unrestricted use by clients or customers of the business, or members of the public; or those which are located in places to which the public is invited, or places which are frequented by the public without special

permission, or other installations where fixtures are installed so that their use is similarly unrestrictive.

PUBLIC SEWER: A sanitary sewer pipeline which is controlled by or under the jurisdiction of a public entity.

RESIDENTIAL UNIT: A living unit with a kitchen sink, kitchenette, or any cooking facilities such as: (a) single family dwelling, (b) multiple dwelling, (c) accessory dwelling unit, (d) apartment, (e) timeshare unit, (f) mobile home, (g) trailer, (h) condominium, or (i) townhouse. Includes all living units in which the owner is renting or leasing the premises, or any portion of the premises.

SANITARY SEWER: A sewer pipeline that carries water-borne wastes from residences, commercial buildings, and industrial plants.

SANITARY SEWER SYSTEM: The system of interceptor pipelines, outfall sewer pipelines, main pipelines, laterals, and pumping stations of the District that carry liquid and waterborne waste from residences, commercial buildings, and industrial plants.

SEASONAL SEATING: When an establishment which is rated and charged according to the number of seats has seating which is located outside, those seats which are located outside shall be charged 50 percent of the normal user fees charged for seats and 50 percent of the regular connection fees which is charged for seats.

SECTION: A subdivision of the District Code unless a specific citation is given to some other enabling legislation. Also, a term used to describe a specified segment of pipeline.

SEPTIC TANK: A watertight receptacle which receives the discharge from a building lateral and is designed and constructed to retain solids, digest organic matter through a period of detention, and is intended to allow the liquids to discharge into the soil outside of the septic tank through a drain field system or one or more seepage pits.

SERVICE LATERAL: The sanitary sewer waste piping which extends from the District main pipeline to the property line cleanout. The property line cleanout is part of the building lateral.

SEWER MAIN PIPELINE: A pipeline that receives wastewater from other sewer main pipelines, private sanitary sewer facilities, and building laterals.

SEWER SERVICE: Granting the privilege of sanitary sewer facility use to agencies, customers or persons in accordance with specific conditions and requirements.

SKI CLUB: An establishment which makes rooms available for use by members of a club or group on a temporary basis for periods of two weeks at a time shall be rated according to the number of fixture units on the premises and as private fixtures.

SNACK BAR: An establishment which uses only disposable products for food service and does not provide seating for the use of its customers.

SPECIAL DISTRICT: The Truckee Sanitary District

STANDARDS: The Standards for Sewer Improvements for the Truckee Sanitary District.

STANDARD SPECIFICATIONS: Whenever reference is made to the "Standard Specifications" it shall refer to the latest edition of the State of California, Department of Public Works, Division of Highways STANDARD SPECIFICATIONS. Where the terms "State" or "Engineer" are used in the "Standard Specifications" or any documents or instruments where this document or the developer's specifications govern, they shall be construed to mean the District or the General Manager as defined in this article.

STATEMENT OF FACTS: Any information or documentation provided to the District by the owner.

STREET: Any public highway, road, street, avenue, alley, way, public place, public easement or right-of-way.

STREET PROPERTY LINE: A building line, where one has been established by ordinance; otherwise, the street property line itself.

STUB OUT: The connection point to the sanitary sewer. This point of connection is usually located near the property line at the terminus of the service lateral. A term also used for a short, capped extension of the District's sanitary sewer system for future pipeline extension.

SWIMMING POOL: All swimming or wading pools containing 2,000 gallons of water or more, and all non-residential whirlpool baths and hot tubs. All swimming pools, non-residential whirlpool baths and hot tubs, may discharge backwash and drain wastewater into the public sewer system.

If swimming pool draining and backwash is discharged to the sanitary sewer system, written approval must be obtained from the General Manager. No person shall discharge any substance into the sewer system without first notifying the District. The General Manager obtains the right to prohibit the draining of swimming pools when, in his/her opinion, such activity would deleteriously affect the operation of the sewer system-generally July 15 through September 15 and April 15 through May 15, but not inclusively or exclusively. Draining operations shall take place only between the hours of 9 P.M. and 7 A.M. or any other time with prior approval of the General Manager.

TAPPING: The forming of a Tee or Wye branch connection to an existing sewer main pipeline by installing a Tee or Wye Saddle.

TEE: A fitting for a branch on which the spur joins the barrel of the pipe at an angle of approximately 90 degrees.

TOWN: The Town of Truckee, in the County of Nevada, in the State of California, represented by the Town Manager acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

TOXIC WASTE: Any waste that is poisonous or hazardous to human, animal and/or plant life.

TRAP: A fitting or device which provides a liquid seal to prevent the emission of sewer gas or air without materially affecting the flow of wastewater or wastewater through it.

T-TSA: Tahoe-Truckee Sanitation Agency, a regional wastewater treatment facility.

USER FEES: A regular charge to an owner or designated representative for the use of the public sanitary sewer system.

WASTEWATER: The spent water of a community, which may be a combination of liquid and water carried wastes from residences, commercial buildings, industrial plants, etc.

WASTEWATER PUMPING PLANT: Any works or device used to raise wastewater from a lower to a higher level or to overcome friction in a pipeline.

WASTEWATER TREATMENT FACILITY: Any arrangement of devices and structures used for treating wastewater.

WYE OR "Y": A fitting for a branch on which the spur joins the barrel of the pipe at an angle of approximately 45 degrees.

Abbreviations

ASTM	American Society for Testing Materials
AWS	American Welding Society
AWWA	American Water Works Association, Inc.
NEMA	National Electrical Manufacturers Association
NEC	National Electrical Code
UBC	Uniform Building Code
UPC	Uniform Plumbing Code