



LAKE SHASTINA COMMUNITY SERVICES DISTRICT
 16320 Everhart Drive - Weed CA 96094 - Voice 530-938-3281 - Fax 530-938-4739

Application # _____
 Account # _____

APPLICATION FOR WATER AND/OR SEWER CONNECTION

DATE _____ APN _____ UNIT # _____ LOT # _____

OWNER'S NAME _____

I(We) authorize the LSCSD to send all correspondence, if applicable, regarding this application to the email address noted below: YES ___ NO ___

EMAIL: _____ TELEPHONE _____
 CELL PHONE _____

MAILING ADDRESS _____

PROJECT ADDRESS, if different than mailing address _____

CONTRACTOR _____ TELEPHONE _____
 CELL PHONE _____

Required Information to be submitted with payment of the below fees

Plot Plan

FEES

\$ _____	\$ 265.00	Water Connection
\$ _____	\$ 478.00	Capacity Expansion Fee – applicable with each Water Service Hook Up (Effective 7/20/07: \$320.00 Water System, \$158.00 Fire Suppression)
\$ _____	\$7,920.64	Sewer Connection (4-inch connection)
	Other <input type="checkbox"/>	_____

\$ _____ **TOTAL FEES**

Note: All fees are subject to change by LSCSD Board of Directors

Owners Signature: _____ **Date** _____

If contractor is acting as owner's agent and in behalf of owner, please sign below. Notices to be sent to owner.

Contractor's Signature: _____ **Date** _____

Lake Shastina Community Services District (LSCSD)
16320 Everhart Drive
Weed CA 96094
Phone: 530-938-3281

APPLICATION NO.: _____

DATE RECEIVED: _____

APPLICATION FOR WATER CONNECTION

DATE: _____ ESTIMATED DATE OF PROJECT COMPLETION: _____

OWNER: _____

PHONE: _____

OWNER'S MAILING ADDRESS: _____

AUTHORIZED AGENT (CONTACT) DURING CONSTRUCTION (if different than owner):

NAME: _____

MAILING ADDRESS: _____ PHONE: _____

Application is hereby made for a water meter/connection at UNIT: _____ LOT: _____. By signing this application, permission is hereby granted for the LSCSD and its agents to enter said property for the purpose of providing any and all water system services and to verify compliance with all LSCSD regulations. As owner, or by the authority granted to the undersigned as agent for the owner, the applicant agrees to observe all LSCSD regulations, now or hereafter adopted, relating to the water service and to pay water bills promptly. Delinquent accounts are subject to discontinuance of services and to suitable action at law including cost of suit in any judgment in favor of the LSCSD.

No water line shall be covered at any point until it has been inspected by the LSCSD. It shall be the duty of the owner, or the authorized agent, to notify the LSCSD office regarding any trench inspection or permanent service connection. Such notice shall be given not less than 24 hours before the inspection/connection is required. Notification on Friday will be addressed the next regular work day. LSCSD personnel only shall hook up any service connection to the water system. Should anyone other than LSCSD personnel hook up a line to the water system, a fine of \$250 may be levied against the owner of record and the service will be locked in the off position. The complete water connection application (originally attached to this page) has additional information regarding this matter.

OWNER'S SIGNATURE (required):

AUTHORIZED AGENT'S SIGNATURE (required):

LSCSD Admin. Staff to complete the following: Water Meter/Connection Fee \$ _____

Water Capacity Fee \$ _____ Fire Suppression Fee \$ _____

Staff Initials: _____ (fees paid on date application received)

LSCSD Public Works Staff to complete the following:

1. Added to Emer. Not. Plan: _____
2. Date Temp. Serv. Installed: _____
3. Corner Serv. Located: _____
4. Initial Depth of Curb Stop: _____
5. Lowered to: _____ Raised to: _____
6. Marked on Serv. Map: _____
7. Marked on Res. Map: _____
8. Trench Inspection:
Depth: _____ Bedded: _____
9. Lateral Trench to House Includes: Water, TV,
Phone, Power, Other: _____

10. Location - Owner's Shutoff: _____
11. Location - Regulator: _____
12. Pipe to House: C _____ P _____ Inch
13. Date Perm. Serv. Installed: _____
14. Prop. Pin Removed: Yes _____ No _____
Lowered _____ Could Not Locate _____
15. Pressure: _____
16. % Complete & Date
% _____ Date _____ % _____ Date _____
% _____ Date _____ % _____ Date _____

LSCSD Public Works Staff to complete the following:

UNIT: _____ LOT: _____

Second Service: UNIT: _____ LOT: _____ Street Service Borders: _____

COST BREAKDOWN OF WATER HOOKUP

Date	Material	Quantity	Cost
	Meter Box		
	UV 83.42W-6 & 1/2" or 7 & 1/4" Branch		
	1 & 1/4" x 1" Brass Reducing Bushing		
	#2 Idler		
	Meter - 3/4" or 1"		
	L31.23 Angle Meter Coupling		
	1" S x MIP PVC Adpt.		
	1" S x S PVC 90 Degree Elbow		
	1" S PVC Cap		
	1" S x S PVC Adpt.		
	1" S x S PVC Coupling		
	Pipe - 3/4" or 1"		
	90° Angle Check Valve		

Meter Number: _____ Meter Reading Gallons: _____

	DATE	INITIALS	HOURS	INITIALS	HOURS	INITIALS	HOURS
LOCATED							
TEMPORARY SERVICE INSTALLED							
TRENCH INSPECTION / Other							
TRENCH INSPECTION / Other							
PERMANENT SERVICE INSTALLED							

WATER METER/CONNECTION AS-BUILT DIAGRAM:

Lake Shastina Community Services District (LSCSD)
16320 Everhart Drive
Weed CA 96094
Phone: 530-938-3281

APPLICATION NO.: _____

DATE RECEIVED: _____

APPLICATION FOR SEWER INSTALLATION

DATE: _____ ESTIMATED DATE OF PROJECT COMPLETION: _____

OWNER: _____ PHONE: _____

OWNER'S MAILING ADDRESS: _____

AUTHORIZED AGENT(CONTACT) DURING CONSTRUCTION (if different than owner):

NAME: _____

MAILING ADDRESS: _____ PHONE: _____

Application is hereby made for a sewer connection at UNIT: _____ LOT: _____. By signing this application, permission is hereby granted for the LSCSD and its agents to enter said property for the purpose of providing any and all sewer system services and to verify compliance with all LSCSD regulations. As owner, or by the authority granted to the undersigned as agent for the owner, the applicant agrees to observe all LSCSD regulations, now or hereafter adopted, relating to the sewer service and to pay sewer bills promptly. Delinquent accounts are subject to discontinuance of services and to suitable action at law including cost of suit in any judgment in favor of the LSCSD.

No sewer line shall be covered at any point until it has been inspected by the LSCSD. It shall be the duty of the owner, or the authorized agent, to notify the LSCSD office when the installation is ready for inspection. Such notice shall be given not less than 24 hours before the work is to be inspected. Notification on Friday will be addressed the next regular work day. The complete sewer installation application (originally attached to this page) has additional information regarding sewer specifications.

NOTE: If a privately owned sewage pump is involved, the placement of the pump, sump and electrical control panels must be approved by the LSCSD. Failure to make prior arrangements with the LSCSD can result in substantial expense to the owner if units must be relocated to meet code and be accessible to maintenance.

OWNER'S SIGNATURE (required):

AUTHORIZED AGENT'S SIGNATURE (required):

LSCSD Admin. Staff to complete the following:

Sewer Connection Fee \$ _____

Staff Initials: _____ (fee paid on date application received)

LSCSD Public Works Staff to complete the following:

UNIT: _____ LOT: _____

Second Service: UNIT: _____ LOT: _____

Depth to flow line referenced from location identified by: Post _____ Wire _____ Other _____

COST BREAKDOWN OF SEWER HOOKUP

Date	Material Used	Cost	Equip/Hrs	Cost	Labor/Hrs	Cost	TOTAL COST

	DATE	INITIALS	HOURS	INITIALS	HOURS	INITIALS	HOURS
LOCATED							
EXTENDED							
TRENCH INSPECTION							
TRENCH INSPECTION							
CONNECTION INSPECTION							
FINAL CONNECTION							

SEWER CONNECTION AS-BUILT DIAGRAM:

**WATER –
LAKE SHASTINA COMMUNITY SERVICES DISTRICT (LSCSD)**

A. WATER PERMIT APPLICATION

Application is available from the Lake Shastina Community Services District Office, 16320 Eyerhart Drive, Weed, CA 96094, (530) 938-3281. An application is included as part of your New Home Construction Packet. Submit application to the Lake Shastina Community Services District, at the same address.

Appropriate fee(s) required must be paid at the time of the application.

B. TEMPORARY HOSE BIBB SERVICE INSTALLATION

After application submitted and fees paid, please allow five (5) days for service installation which includes a temporary hose bib.

(1) Backfilling

Contact the LSCSD for an inspection of the line from the house to the meter prior to backfilling your lateral trench.

(2) Depth of lines

All lines shall be at a minimum depth of twenty-four inches (24") to prevent freezing.

C. FINAL WATER HOOKUP

Allow twenty-four (24) hours for actual connection to the house line by the LSCSD personnel after notification for final hookup to the LSCSD.

(1) Connection

Connection is to be made ONLY by LSCSD personnel

A fine of \$250 may be levied against the shareholder if connection is made by an unauthorized person.
See additional information pertaining to water service requirements provided in this packet.

LAKE SHASTINA COMMUNITY SERVICES DISTRICT
16320 EVERHART DRIVE
WEED, CA 96094

TELEPHONE (530) 938-3281 FAX (530) 938-4739

DATE: _____

TO: Applicant for Water Service

SUBJECT: Temporary Service and Hookup to Water System/Possible High Pressure

Dear Owner/Constituent/User:

We have received an application for residential hookup to your UNIT: _____ LOT: _____ This service will be installed as soon as possible.

There are a few points of major concern the Lake Shastina Community Services District (LSCSD) would like to stress:

1. Weather permitting, the LSCSD will be out within a few days to install a temporary service consisting of a hose bib. The responsibility of seeing that no damage occurs to this service is yours. Damage might be caused by freezing, delivery trucks, or during excavation. Your fellow constituents cannot bear the cost of repairing services damaged through negligence; therefore, if damage occurs, a bill shall be sent to the owner of record for this service, including water used.
2. LSCSD personnel only shall hook up any service connection to the water system. Should anyone other than LSCSD personnel hook up a line to the water system, a fine of \$250.00 (two hundred fifty dollars) may be levied against the owner of record and the service will be locked in the off position. Such fee shall be paid and owner/contractor shall show proof of proper installation before water service shall be unlocked. This policy was established by the LSCSD so that the LSCSD can meet State Department of Health requirements and also to assure all constituents that fellow constituents are installing service lines to code.
3. Please refer to the International Uniform Plumbing code and the LSCSD requirements regarding installation of the water service line included in the guidelines for Home Construction at Lake Shastina. This packet of guidelines is available for \$2.00 at the Lake Shastina Community Services Office, at the address listed above.
4. The LSCSD must maintain high pressure within the system to insure adequate pressure throughout the system. Also, pressure in main service lines fluctuate and the LSCSD will not be responsible for damages, when pumps cycle; therefore, it is strongly recommended that you install a pressure regulator in your house service line to prevent wear or possible potential damage to your plumbing. Code requires a regulator in those locations where pressure exceeds 79 PSI.

We will appreciate your cooperation in these matters. If you have any questions regarding pressure or volume, please contact us at (530) 938-3281.

Sincerely,

BOARD OF DIRECTORS
Lake Shastina Community Services District

LAKE SHASTINA COMMUNITY SERVICES DISTRICT
16320 EVERHART DRIVE
LAKE SHASTINA
WEED, CA 96094
(530) 938-3281 FAX: (530) 938-4739

WATER APPLICANT

The installation of the service line is required to meet the code spelled out in the Uniform Plumbing Code and any requirements deemed necessary by the Lake Shastina Community Services District (LSCSD). Listed below are just a few of the pertaining codes.

UNIFORM PLUMBING CODE

Sec 209.2 Trench -- Excavation and Backfilling

(e) Water service pipes or any underground water pipes shall not be run or laid in the same trench with building sewer or drainage piping constructed of materials which are not approved within a building unless both of the following conditions are met:

Sec 609.2.1 The bottom on the water pipe, at all points, shall be at least 24 inches above the top of the sewer line.

Sec 609.2.2 The water pipe shall be placed on a solid shelf excavated on one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer line.

Sec 605.3 Valves

A fullway valve controlling all outlets shall be installed on the discharge side of each water meter. (LSCSD requires a 24 inch minimum separation between LSCSD enclosure and said valve.)

Sec 609.1 Installation, Inspection and Testing

All water piping shall be adequately supported to the satisfaction of the Administrative Authority. Burred ends shall be reamed to the full bore of the pipe. Changes in directions shall be made by the appropriate use of fittings, except that changes in directions in copper tubing, providing that such bends are made by the use of forming equipment which does not deform or create a loss in cross sectional areas of the tubing. All piping, equipment, appurtenances, and devices shall be installed in a workmanlike manner in conformity with the provisions and intent of the Code. All water service yard piping shall be at least 12 inches below the average local frost depth.

LAKE SHASTINA COMMUNITY SERVICES DISTRICT (LSCSD) REQUIREMENTS.

1. Minimum of 24 inch cover over water service line between meter and home.
2. When water and sewer lines are installed in separate trenches, a 5 foot separation between water and sewer lines must exist.
3. A LSCSD inspector must approve trench and plumbing before backfilling. Final connection of services will not be made until all requirements for both water and sewer are met.
4. LSCSD recommends that all services contain a pressure regulator due to fluctuating pressure. NOTE: LSCSD will not hook up service that exceeds a static pressure of 79 PSI without a pressure regulator having been installed.

CHAPTER 6

WATER SUPPLY AND DISTRIBUTION

601.0 Running Water Required

601.1 Except where not deemed necessary for safety or sanitation by the Administrative Authority, each plumbing fixture shall be provided with an adequate supply of potable running water piped thereto in an approved manner, so arranged as to flush and keep it in a clean and sanitary condition without danger of backflow or cross-connection. Water closets and urinals shall be flushed by means of an approved flush tank or flushometer valve. In jurisdictions which adopt Appendix J, water closets, urinals, and trap primers in designated non-residential buildings may be provided with reclaimed water as defined and regulated by Appendix J of this Code.

601.2 Faucets and diverters shall be connected to the water distribution system so that hot water corresponds to the left side of the fittings.

602.0 Unlawful Connections

602.1 No installation of potable water supply piping or part thereof shall be made in such a manner that it will be possible for used, unclean, polluted or contaminated water, mixtures, or substances to enter any portion of such piping from any tank, receptacle, equipment, or plumbing fixture by reason of back-siphonage, by suction or any other cause, either during normal use and operation thereof or when any such tank, receptacle, equipment, or plumbing fixture is flooded, or subject to pressure in excess of the operating pressure in the hot or cold water piping.

602.3 No person shall make a connection or allow one to exist between pipes or conduits carrying domestic water supplied by any public or private water service system, and any pipes, conduits, or fixtures containing or carrying water from any other source or containing or carrying water which has been used for any purpose whatsoever, or any piping carrying chemicals, liquids, gases, or any substances whatsoever, unless there is provided a backflow prevention device approved for the potential hazard.

602.4 No plumbing fixture, device, or construction shall be installed or maintained or shall be connected to any domestic water supply when such installation or connection may provide a possibility of polluting such water supply, or may provide a cross-connection between a distributing system of water for drinking and domestic purposes and water which may become contaminated by such plumbing fixture, device, or construction unless there is provided a backflow prevention device approved for the potential hazard.

602.5 No water piping supplied by any private water supply system shall be connected to any other source of supply without the approval of the

Administrative Authority, Health Department, or other Department Having Jurisdiction.

603.0 Cross-Connection Control

Cross-connection control shall be provided in accordance with the provisions of this chapter.

No person shall install any water operated equipment or mechanism, or use any water treating chemical or substance, if it is found that such equipment, mechanism, chemical or substance may cause pollution or contamination of the domestic water supply. Such equipment or mechanism may be permitted only when equipped with an approved backflow prevention device or assembly.

Approval of Devices or Assemblies. Before any device or assembly is installed for the prevention of backflow, it shall have first been approved by the Administrative Authority. Devices or assemblies shall be tested for conformity with recognized standards or other standards acceptable to the Administrative Authority which are consistent with the intent of this Code.

All devices or assemblies installed in a potable water supply system for protection against backflow shall be maintained in good working condition by the person or persons having control of such devices or assemblies. The Administrative Authority or other department having jurisdiction may inspect such devices or assemblies and, if found to be defective or inoperative, shall require the repair or replacement thereof. No device or assembly shall be removed from use or relocated or other device or assembly substituted, without the approval of the Administrative Authority.

603.1 Backflow Prevention Devices, Assemblies, and Methods

603.1.1 Airgap. The minimum airgap to afford backflow protection shall be in accordance with Table 6-2.

603.1.2 Atmospheric Vacuum Breaker (AVB). An atmospheric vacuum breaker consists of a body, a checking member and an atmospheric opening.

603.1.3 Double Check Valve Backflow Prevention Assembly (DCV). A double check valve backflow prevention assembly consists of two independently acting internally loaded check valves, four properly located test cocks and two isolation valves.

603.1.4 Pressure Vacuum Breaker Backflow Prevention Assembly (PVB). A pressure vacuum breaker backflow prevention assembly consists of a loaded air inlet valve, an internally loaded check valve, two properly located test cocks and two isolation valves.

603.1.5 Reduced Pressure Principle Backflow Prevention Assembly (RPP). A reduced pressure principle backflow prevention assembly consists of two independently acting internally loaded check valves, a differential pressure relief valve, four properly located test cocks and two isolation valves.

TABLE 6-2
Minimum Airgaps for Water Distribution⁴

Fixtures	When not affected by side walls ¹ inches (mm)	When affected by side walls ² inches (mm)
Lavatories and other fixtures with effective openings ³ not greater than one-half (1/2) inch (13 mm) in diameter	1 (25)	1-1/2 (38)
Sinks, laundry trays, goose neck bath faucets and other fixtures with effective openings ³ not greater than three-quarters (3/4) inch (19 mm) in diameter	1-1/2 (38)	2-1/4 (57)
Over rim bath fillers and other fixtures with effective openings ³ not greater than one (1) inch (25 mm) in diameter	2 (51)	3 (76)
Effective openings ³ greater than one (1) inch (25 mm) in diameter	Two (2) times diameter of effective opening	Three (3) times diameter of effective opening

1 Side walls, ribs or similar obstructions do not affect airgaps when spaced from the inside edge of the spout opening a distance greater than three times the diameter of the effective opening for a single wall, or a distance greater than four times the effective opening for two intersecting walls.

2 Vertical walls, ribs or similar obstructions extending from the water surface to or above the horizontal plane of the spout opening other than specified in Note 1, above, the effect of three or more such vertical walls or ribs has not been determined. In such cases, the airgap shall be measured from the top of the wall.

3 The effective opening shall be the minimum cross-sectional area at the seat of the control valve or the supply pipe or tubing which feeds the device or outlet. If two or more lines supply one outlet, the effective opening shall be the sum of the cross-sectional areas of the individual supply lines or the area of the single outlet, whichever is smaller.

Airgaps less than one (1) inch (25 mm) shall only be approved as a permanent part of listed assembly that has been tested under actual backflow conditions with vacuums (0 to 25 inches (0.6 m) of mercury.

grade, floor or platform. Installations elevated more than five (5) feet (1.5 m) above the floor or grade shall be provided with a permanent platform capable of supporting a tester or maintenance person.

603.2.4 Direct connections between potable water piping and sewer connected wastes shall not exist under any condition with or without backflow protection. Where potable water is discharged to the drainage system it shall be by means of an approved airgap of two (2) pipe diameters of the supply inlet, but in no case shall the gap be less than one (1) inch (25.4 mm). Connection may be made to the inlet side of a trap provided that an approved atmospheric vacuum breaker is installed not less than six (6) inches (152.4 mm) above the flood-level.

TABLE 6-1
Backflow Prevention Devices, Assemblies and Methods

Device, Assembly or Method	Degree of Hazard			Installation ^{2,3}	
	Pollution (Low Hazard)	Contamination (High Hazard)			
	Back-Siphonage	Back-Pressure	Back-Siphonage	Back-Pressure	
Airgap	X		X		See table in this chapter.
Atmospheric Vacuum Breaker	X		X		Upright position. No valves downstream. Minimum of six (6) inches (152.4 mm) or listed distance above all downstream piping and flood level rim of receptor. ^{4,5}
Double Check Valve Backflow Preventer	X	X			Horizontal, unless otherwise listed. Requires one (1) foot (0.3 m) minimum clearance at bottom for maintenance. May need platform/ladder for test and repair. Does not discharge water.
Pressure Vacuum Breaker	X		X		Upright position. May have valves downstream. Minimum of twelve (12) inches (0.3 m) above all downstream piping and flood level rim of receptor. May discharge water.
Reduced Pressure Principle Backflow Preventer	X	X	X	X	Horizontal unless otherwise listed. Requires one (1) foot (0.3 m) minimum clearance at bottom for maintenance. May need platform/ladder for test and repair. May discharge water.

- See description of devices and assemblies in this chapter.
- Installation in pit or vault requires previous approval by the Administrative Authority.
- Refer to general and specific requirements for installation.
- Not to be subjected to operating pressure for more than 12 hours in any 24 hour period.
- For deck-mounted vacuum breakers, see Section 603.3.14.

603.2. General Requirements

603.2.1 All assemblies shall conform to listed standards and be acceptable to the Administrative Authority having jurisdiction over the selection and installation of backflow prevention assemblies.

603.2.2 The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation and at least on an annual schedule thereafter or more often when required by the Administrative Authority.

603.2.3 Access and clearance shall be provided for the required testing, maintenance and repair. Access and clearance shall require a minimum of one (1) foot (0.3 m) between the lowest portion of the assembly and

rim of such trapped fixture, so that at no time will any such device be subjected to any back-pressure.

603.2.5 Backflow preventers for hot water over 110°F (43.3°C) shall be a listed type designed to operate at temperatures of 110°F (43.3°C) or more without rendering any portion of the assembly inoperative.

603.2.6 Fixtures, appliances or appurtenances with integral backflow preventers or integral airgaps manufactured as a unit shall be installed in accordance with their listing requirements.

603.2.7 In cold climate areas, backflow assemblies and devices shall be protected from freezing by a method acceptable to the Administrative Authority.

03.3 Specific Requirements

603.3.1 Water Closet and Urinal Flushometer Valves shall be equipped with a listed atmospheric vacuum breaker. The vacuum breaker shall be installed on the discharge side of the flushometer valve with the critical level at least six (6) inches (152.4 mm) or the distance according to its listing above the overflow rim of a water closet bowl or the highest part of a urinal.

603.3.2 Water Closet and Urinal Tanks shall be equipped with a listed ballcock. The ballcock shall be installed with the critical level at least one (1) inch (25.4 mm) above the full opening of the overflow pipe. In cases where the ballcock has no hush tube, the bottom of the water supply inlet shall be installed one (1) inch (25.4 mm) above the full opening of the overflow pipe. Water closets having the flush valve seat less than one (1) inch (25.4 mm) above the flood level rim of the closet bowl shall have the ballcock installed in a separate and isolated compartment of the tank, or shall be provided with a sheathed ballcock, or other equivalent protection.

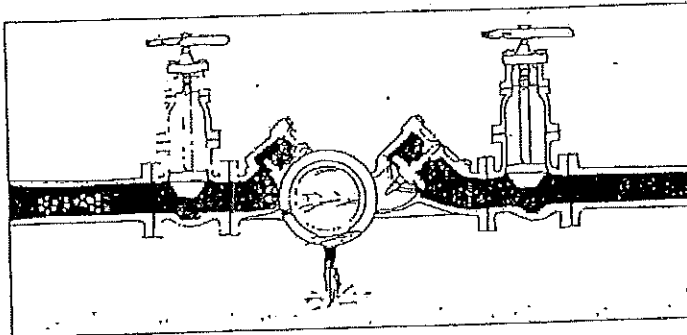
603.3.3 Water Closet Flushometer Tanks shall be protected against backflow by an approved backflow prevention assembly, device or method.

603.3.4 Heat Exchangers and other assemblies or methods of construction using potable water shall be of listed construction and materials. Potable water shall be separated from the fluids or gasses by a minimum of two separate walls, with a positive, vented leak detection path. The sections in contact with potable water shall be of material and weights suitable for potable water as set forth in this chapter.

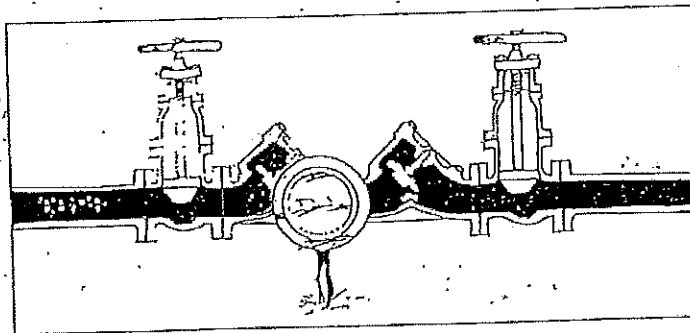
603.3.5 Inlets to Tanks, Vats, Sumps, Swimming Pools and other receptors when protected by a listed atmospheric vacuum breaker shall have such atmospheric vacuum breaker installed on the discharge side of the last valve with the critical level not less than six (6) inches (152.4 mm) or in accordance with its listing above the flood level rim of such equipment, and all downstream piping. Water supply inlets not protected by atmospheric vacuum breakers shall be protected by an approved airgap. Where atmospheric vacuum breakers or airgaps are not installed other backflow preventers suitable for the possible

How Backflow Prevention Devices Work

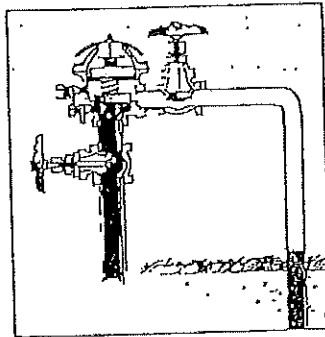
This figure shows an RP device during a backsiphonage condition. If you will notice both checks are closed tight and the pressure differential relief valve is discharging to atmosphere. This is due to the fact that the relief valve is designed to maintain a lower pressure in the zone between the two check valves than the supply pressure:



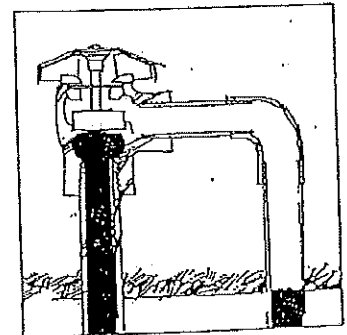
In this figure of an RP device, there is a backpressure condition. The second check is fouled with a piece of pipe scale which permits the higher pressure to flow back into the zone. Here the relief valve discharges the water to atmosphere maintaining the pressure in the zone lower than the supply pressure.



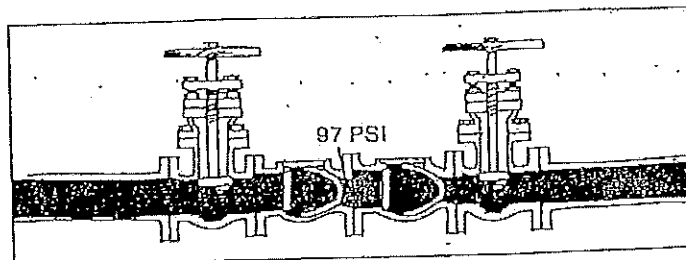
In this view of a pressure vacuum breaker, a backsiphonage condition has caused the check to close against its seat and the air-inlet has opened so that the pressure in the body of the device is atmospheric. If the check was fouled by some foreign material, only air would be pulled back into the domestic supply system instead of the non-potable water downstream of the device.



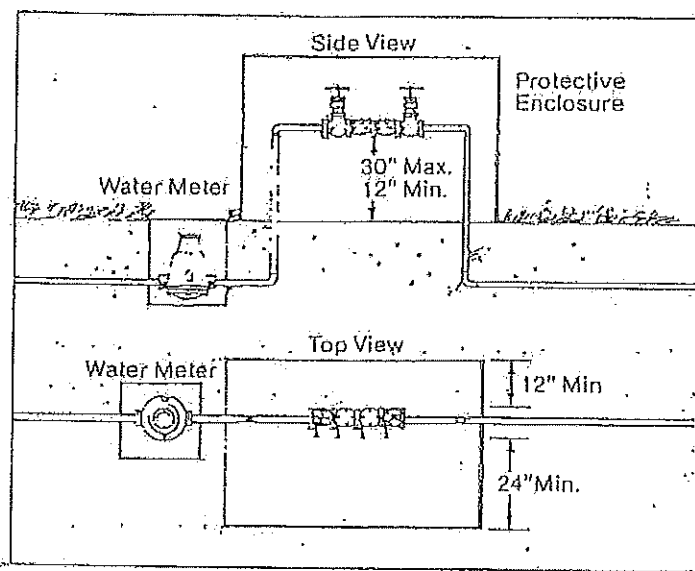
In this picture of an atmospheric vacuum breaker, a backsiphonage condition exists. This condition has caused the check-float to drop away from the air-inlet and seat on the check seat, which prevents the non-potable water from being backsiphoned. If the check-float did not seat properly, again only air would be sucked back into the domestic water system.



In this view of a double check valve, there is backpressure from a source downstream which has caused the second check to close tightly against this reverse pressure. The first check has closed tightly by itself, thus giving two barriers against the backflow condition.



Double Check Valve
 In these figures, the double check valve is shown on the service connection. It can also be used for internal protection as well. The minimum and the maximum spacings are the same as they are for the RP device.

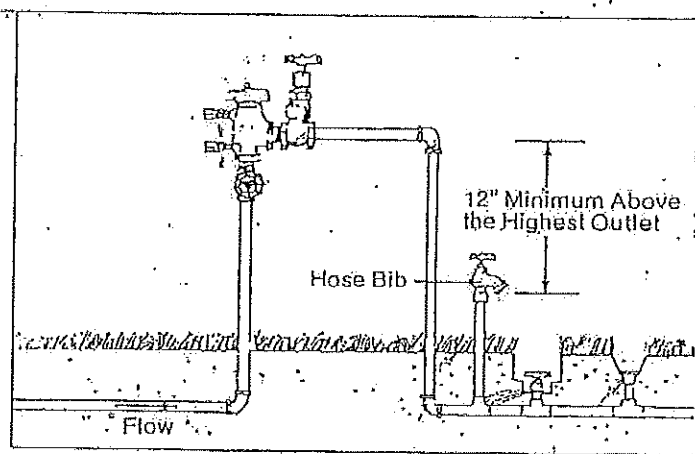


Any mechanical device can fail. To ensure that these mechanical backflow prevention devices are working properly, they must be tested on a regular basis. Many states require that they be tested at least once a year. The following sections are a step-by-step guide for testing the various types of devices.

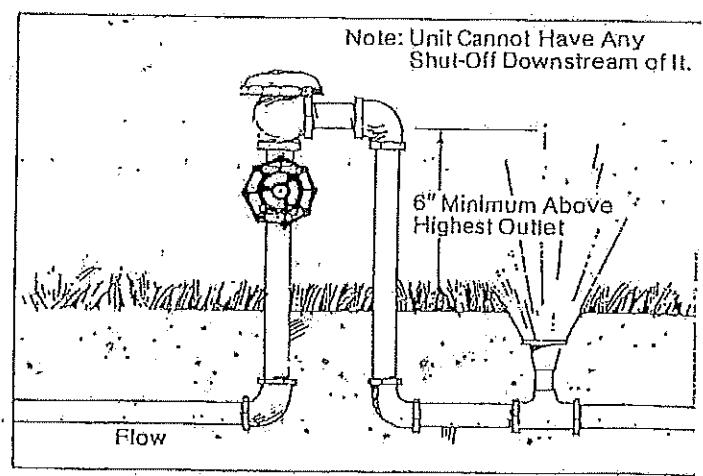
Reduced Pressure Principle Devices

- Equipment required:
 1—Differential Pressure Gage, 0-15 psid.
 3—6 ft. lengths of 1/4" I.D. high pressure hose with screw type 1/4" couplings.
 3—1/4" IPS to hose adapter fittings.
 Wrenches as needed.
 *Preassembled test kits are available

Pressure Vacuum Breaker
 A pressure vacuum breaker cannot be installed where there can be backpressure, or where there can be backsiphonage. The pressure vacuum breaker can have shut-off valves downstream of the device. The PVB must be installed at least 12" above the highest outlet or, if it is discharging an open tank, at least 12" above the highest overflow rim of the tank. The following figure shows a typical installation on a sprinkler system.



Atmospheric Vacuum Breaker
 Just as the pressure vacuum breaker, the atmospheric vacuum breaker cannot be installed where there can be backpressure, only where there can be backsiphonage. An atmospheric vacuum breaker cannot have any shut-off valves downstream of it. It also must be installed at least 6" above the highest outlet or the topmost overflow of a non-pressure tank. The following illustration shows the AVB on a sprinkler system.



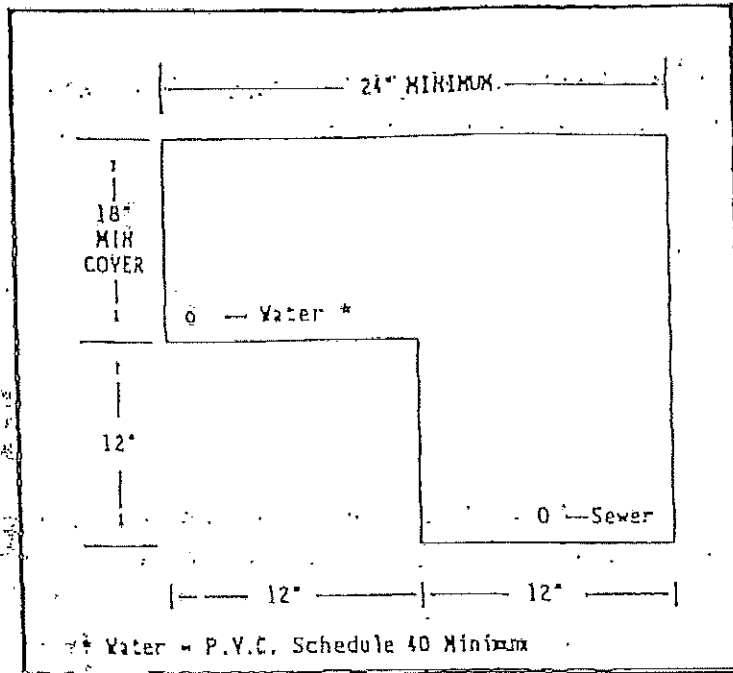
TRENCH DETAILS

September 29, 1995

I.

COMMON TRENCH

A.

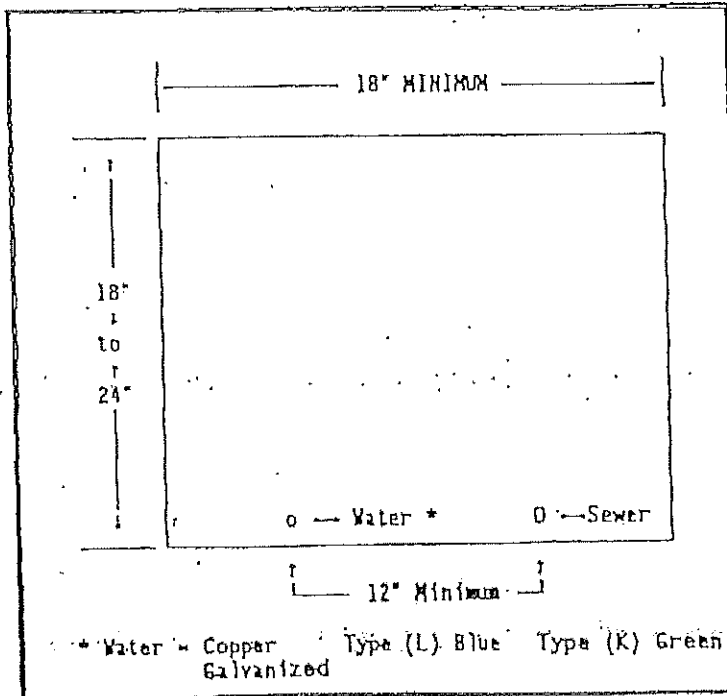


TRENCH DETAILS

September 29, 1995

COMMON TRENCH

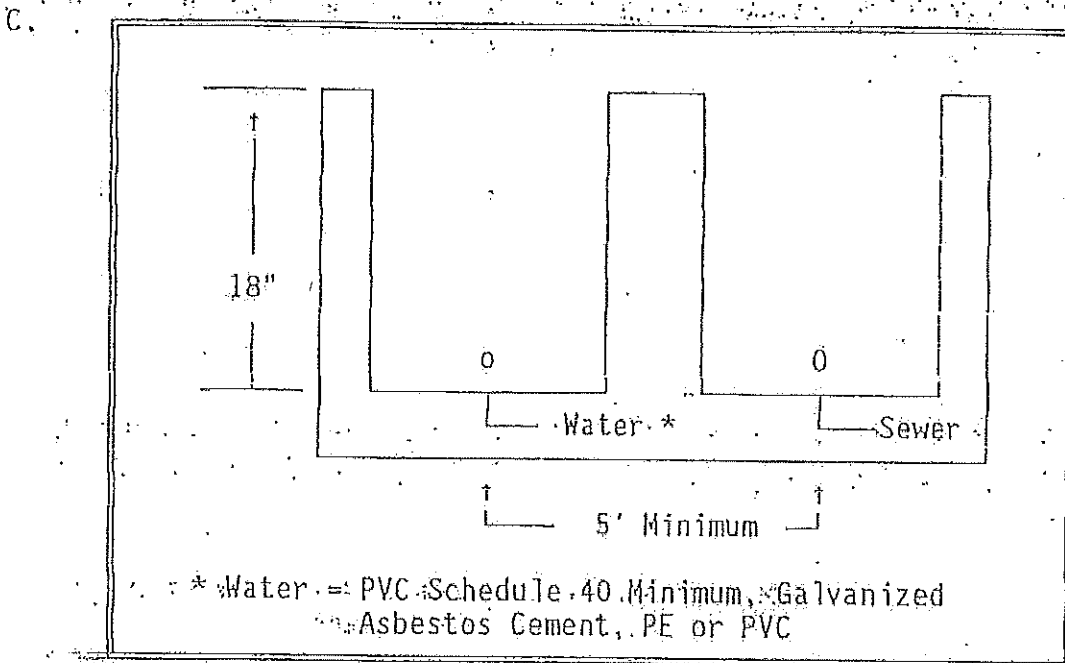
B.



TRENCH DETAILS

September 29, 1995

2. SEPARATE TRENCHES



NONE OF THESE DRAWINGS ARE TO SCALE

UPC Sec 604-1: Brass, copper (Type L or K), galv steel, cast iron, galv malleable iron, galv wrought iron, Asbestos Cement, PE, CPVC or PVC

UPC Sec 605-3: Fullway gate valve required downstream of water.

UPC Sec 605-6: Shall be accessible.

UPC Sec 608.2: Excessive water pressure. If static is in excess of 80 PSI, an approved type pressure regulator is required.

UPC Sec 609.1: Installation 12" below average frost line, all piping to be installed in a workmanlike manner.

UPC Sec 609.2: Water pipes shall not be run or laid in the same trench as building sewer or drainage piping constructed of clay or materials which are not approved for use within a building unless both of the following conditions are met:

609.2.1: The bottom of the water pipe, at all points, shall be at least twelve (12) inches (0.3m) above the top of the sewer or drain line.

SEWER – LAKE SHASTINA COMMUNITY SERVICES DISTRICT (LSCSD)

A. SEWER CONNECTION APPLICABILITY

Sewer connection is applicable only to lots where sewers are required and the LSCSD sewer system is available, i.e. Units 1, 2, 3, 4, 5, 5-2, 5-3, 5-4, 6, 9-1 (except Lots 1-6, 152-156, 180-200 and 251-264 which are approved for septic systems) and 9-2. There are lots in the 7's and 8's that are presently sewered.

Call the Lake Shastina Community Services District at (530) 938-3281 for more information.

B. SEWER PERMIT APPLICATION

(1) Sewer Permit:

Apply for a sewer permit at the Lake Shastina Community Services District Office, 16320 Everhart Drive, Weed, CA 96094, (530) 938-3281.

An application is included as part of your New Home Construction Packet.

(2) Septic Lot

You will be directed by the Siskiyou County Building Department to obtain the appropriate signature.

Contact the Siskiyou County Health Department to check if a septic system is authorized.

(3) Sewer Lot

If lot is sewered, the Siskiyou County Building Department requires a NOTICE OF PROJECT OF APPROVAL form, signed by the LSCSD Public Works Superintendent/Watermaster or designated agent for the LSCSD.

(4) Approval Signatures

Before the signature of the Public Works Superintendent/Watermaster or designated agent can be obtained, the following is required:

a. Submittals: The following must have been submitted to the LSCSD Office:

House plans – two (2) copies

Plot plan – two (2) copies

Sewer Permit Application – completed

Appropriate fees paid

At this time, the applicant will be provided a “SEWER SPECIFICATION MANUAL” and briefed as to particulars of their specific lot and advised to contact the LSCSD prior to any excavation on the building site.

SEWER SPECIFICATIONS MANUAL

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LAKE SHASTINA COMMUNITY SERVICES DISTRICT
16320 EVERHART DRIVE
WEED, CALIFORNIA 96094

TELEPHONE (530) 938-3281 FAX (530) 938-4739

10 August 1982

SPECIFICATIONS MANUAL

"Forward"

In accordance with District Resolution 6-82, approved May 7, 1982, the District has established this specifications manual for the purpose of addressing the needs of the District regarding sewer system installations within the District that do not come under the responsibility of the Siskiyou County Health Department nor the Building Department, therefore becoming the sole responsibility of the Lake Shastina Community Services District.

This specifications manual being referenced in Article II, Section 201 of the District Ordinance 1-80 is designed to provide a good, sanitary sewer system (with minimum regulations) that is capable of moving wastewater from the building-plumbing system via the building sewer and lateral sewer to the public sewer system. For the protection of public health, safety and welfare, these specifications have the force of law in accordance with the basic Ordinance 1-80, yet are capable of being modified by the Board of Directors by Resolution or Minute Action for timely corrections of said specifications when found not to be in the best interest of the public which they serve.

CHAPTER 1: LATERAL SEWER CONNECTION

Section 110. General

At an early date, and prior to the establishment of the elevation of the lowest fixture in the house, application for sewer service shall be made. At that time, the point of connection shall be exposed. The District Engineer/Inspector shall be called to meet with the contractor at the job site. He will determine how the connection will be made and detail the required fittings.

CHAPTER 2: BUILDING SEWER PUMP INSTALLATIONS

Section 210. General

Pump installations shall be required either to propel wastewater from a building to the low pressure sewer system or lifting said wastewater upwards to the gravity sewer system. The installation shall include, but not be limited to, the following: sump or septic tank, grinder/effluent/lift pump, check valve, stop valve, disconnect coupling, start/stop mechanism, high water audio and visual alarms, electrical junction box and necessary controls insulated and weatherproofed.

Pump installation shall be at the sole cost and expense of the applicant, owner or agent.

Section 220. Sump/Septic Tank

A sump is a tank which receives wastewater located below the normal grade of the main gravity or gradient of the low pressure sewer system and which must be emptied by a pump, lift or grinder respectively, whereas a septic tank is a watertight receptacle which receives wastewater and is designed and constructed so as to separate solids from the liquid, digest organic matter through a period of detention and allows the liquids to discharge into an associated sump from which an effluent pump moves the liquid to the low pressure system. Said sump shall be located with the side lot easement unless otherwise authorized by the District Engineer. The septic tank shall be located adjacent to the sump and accessible for pumping services.

Final authorization for use of a septic tank rests with the District Manager after considering recommendations of the District Engineer. It is to be noted that slope of terrain and/or position of dwelling may preclude the use of a septic tank due to inaccessibility.

The sump shall be covered with a watertight lid which prevents escape of wastewater while at the same time providing access to the installed pump for service and replacement when required. Said lid shall be physically attached to the sump.

Section 230. Wastewater Pumps

Wastewater pumps include grinder, effluent and lift. Each is designed to meet a specific objective, but all of which move wastewater from one point to another, i.e., from a sump to the main sewer lines.

Section 231. Grinder Pump

Grinder pumps are required for sumps which receive raw sewage and must discharge same into the low pressure sewer system. Said pump shall be a minimum of 1½ HP and of sufficient head capacity to function against the back pressure of other installed pumps connected to the same low pressure sewer system line extension.

The main advantage of a grinder pump is that solids are ground up into a slurry and discharged along with the wastewater under pressure, thereby being capable of moving sewage over long distances of peaks and valleys. The main disadvantage is that these pumps are relatively expensive and the moving parts required to ground up the solids may contribute to a shorter operational life between major repairs or eventual replacement.

Section 232. Effluent Pump

Effluent pumps are authorized for use in conjunction with a sump which receives wastewater free of solids from a septic tank. This pump, like the grinder, is used to discharge wastewater into the low pressure sewer system and therefore must work against the back pressure of other effluent and/or grinder pumps. Said effluent pump shall be sized and approved by the District Engineer and have sufficient head capability to be compatible with other units and the low pressure sewer main said unit is discharging into. Screened water pumps may be used to move effluent when approved by the District Engineer.

The main advantage of the effluent pump is the lower initial cost and possible longer life between repairs or replacement. The main disadvantage is the necessity of having to separate the solids from the wastewater, usually by use of septic tank which may be difficult to install due to rocky terrain.

Section 233. Lift Pump

A sewage lift pump is used to propel raw sewage, including solids, from a sump located below the level of the gravity sewer main up to said sewer main. This installation is normally found to be necessary for waterfront property where the main gravity sewer line is located above the level of the dwelling being serviced. The actual size (HP) and capacity (GPM) required shall be determined by the specific criteria of each installation; therefore, it is necessary to contact the District Engineer prior to the purchasing of the pump to insure it will meet all requirements.

Section 234. Pump Location

As stated in Section 220, pump is normally located in the side lot easement; nevertheless, the specific location must be approved by the District Engineer. This approved location must be resolved prior to any excavation to preclude additional expense to the owner.

Section 240. Pump Plumbing

Pump plumbing shall be in accordance with effective edition of the Uniform Plumbing Code unless otherwise directed herein.

Section 241. Disconnect Couplings

All pumps shall be connected to the discharge line with a disconnect coupling. Said coupling shall allow ready access to the pump unit for inspection and maintenance. If discharge piping is the only means of lifting the pump, said piping shall be galvanized to provide adequate strength to lift the pump. Any deviation from this requirement must be approved by the District Engineer.

Section 242. Discharge Line

The discharge line shall be sized to be compatible with both the pump discharge and the main sewer line. For grinder and effluent pumps, said line shall be schedule 40 PVC or greater and for lift pumps, said lines shall be ABS, 2" or greater, depending upon the size of the pump discharge.

Section 243. Check Valve

For grinder and effluent pumps, the check valve shall be a ball check valve with "bulge" situated above the axis of flow with the following specifications: 1-1 inlet and outlet; cast iron casing; formophenolic resin ball or equivalent; rubber seal and cast iron flanged connection.

For lift pumps, an approved disk type check valve is authorized. Said check valves shall be constructed so that a mechanical seal against backflow will be provided. When fully opened, it shall have a capacity not less than that of the pipe in which it is installed. The valve shall be installed so that its working parts will be accessible for service and repairs and shall be located adjacent to the sump and between the pump discharge and stop (shut off) valve. Said check valve shall have all bearing parts of corrosion resistant material with access by means of a bolted cover with gasket.

Section 244. Stop Valve

Pump installations shall be provided with an approved American made stop valve, located in the discharge line between the disconnect coupling and the main sewer line. Said stop valve shall, when fully opened, have the same diameter as the discharge line in which it is installed. The valve shall be readily accessible and capable of isolating the sump from the main sewer line (which may be pressurized) so that the check valve and/or pump installation can be serviced.

Section 250. Pump Electrical

Electrical components and wiring shall be in accordance with the effective edition of the National Electrical Code.

Section 251. Start-Stop Mechanize

Each pump shall be provided with appropriate switching mechanism recommended by the pump manufacturer, or equivalent. In all cases, the switching mechanism shall be installed in accordance with the effective edition of the National Electric Code.

Section 252. High Water Alarm

Each sump installation shall be equipped with an approved high water alarm consisting of an audio horn or bell and a visual jewel light so located that said alarm can be heard and seen by the occupant. Specific attention must be paid to type of alarm selected in that some of the less expensive models can only be installed within the dwelling whereas others may be installed either inside or outside exposed to the elements.

Section 253. Control Panel

The electrical control panel shall be located on the side of the pump housing or the dwelling. Said control panel shall meet the specifications of the installed pump and meet the electrical and exterior housing standards established by the National Electrical Code. The panel shall contain auto and manual switching capability for operation of pump unit.

Section 254. Junction Box

With the control panel located on the dwelling and the sump installation located remotely, the distance between the dwelling and the sump housing may require the use of an electrical junction box. If so, said junction box shall be installed in accordance with the National Electrical Code for exterior use. NOTE: THIS JUNCTION BOX SHALL NOT BE INSTALLED WITHIN SUMP HOUSING. THIS IS TO PRECLUDE POTENTIAL ELECTRICAL SHOCK TO MAINTENANCE PERSONNEL WHEN PUMP FAILS AND MUST BE SERVICED!

Section 255. Wiring

Electrical wiring conduits shall be sized to provide for easy removal and replacement of any single wire without damage to, or necessitating removal of, another wire contained therein. All elbows in the conduit shall be sweeps to facilitate pulling of the wire when removal and/or replacement is required.

Section 260. Pumps General

Pump specifications are directly affected by its specific use and back pressure (head) it must overcome. In view of the many variables, i.e., electrical source, fluid and solids to be pumped, capacity required and its location, the choice of appropriate pump may be critical. Since owner has full responsibility for cost of initial purchase and follow-up maintenance, it is highly recommended that owner or their agent contact the District Engineer to review pump specifications and pump curves to evaluate the effectiveness of the pump being considered. This contact should be made prior to purchase.

It is to be noted that the warranty on pumps may only cover the period of 12 months from purchase date or 18 months from manufacture, whichever is least, and then only those faults which can be contributed to improper assembly. Improper handling (picking up by electrical cable), improper installation and improper use (running with no load or discharge valve closed and allowing foreign objects to jam pump) can result in the failure of the pump unit. Read directions carefully and practice good preventative maintenance procedures, e.g., flush with clean water prior to and after returning from periods of nonuse, even for periods as short as a weekend; prevent

grease buildup on walls of sump and electrical floats by ensuring grease in any amount is disposed of with solid waste materials and not allowed to enter drain lines; use garbage disposal units sparingly; and specifically take note that using hot water to flush grease down the drain will not work since the sump is underground and remotely located and therefore very cool, thus allowing grease to solidify within the sump.

When operating the pump manually, it is recommended that the final flush should be done in the automatic mode to ensure the sump is returned to its normal operational level. For effluent pumps, this means the pump will be submerged, thereby inhibiting the corrosive effect of sump gases.

Section 270. Pump Housing

Pump housing shall be constructed of reinforced concrete, concrete block or brick masonry with a 4' square inside dimension. The footing shall extend a minimum of 6" below the top of the sump, and the top shall be a minimum of 8" above the final grade of the adjacent ground.

A screened weephole, 2" in diameter, shall pass through the footing wall at the lowest point and daylight at grade visible to the occupants and District Inspectors.

The pump housing shall be free of all other utilities unless mutually approved by the appropriate utility company and the District Engineer. If approved, said utility shall be properly protected by conduit.

The roof to the pump housing shall be capable of being lifted and restrained in an open position by one individual thereby allowing the owner, maintenance personnel or District Inspector safe access to the pump. NOTE: To ensure positive restraint of the roof in an open position beyond the center, it is recommended that a chain of adequate strength be utilized. Temporary pole support is not considered safe and shall not be used.

The roof shall be essentially flat with a slope not to exceed 1" per foot. It shall be hinged with a hasp and lifting handle at the opposite side. The lid may be framed of 2" x 4"s with a skin of exterior 5/8" plywood siding or may have an aluminum frame with an aluminum waffle plate skin.

The entire structure shall be painted the same color as the house or with suitable contrasting color.

CHAPTER 3: CLEANOUTS

Section 310. Prohibited Connections

Cleanout openings shall not be used for the installation of new fixtures except where approved in writing by the District Office and where another Cleanout of equal access and capacity is provided.

Section 311. Location

Cleanouts shall be located at or near the junction of the building plumbing system and the building sewer and also at the property line for gravity connections.

Section 312. Access

Cleanouts shall be extended vertically to or above the finished level and cleanout plugs shall not be covered with concrete, fill or any other permanent finishing material. In order to conceal or protect a cleanout plug, an enclosed box with removable cover shall be used and be accessible for inspection and use.

Section 313. Clearance

Cleanouts shall be so installed that there is clearance of not less than 24" in front of the cleanout for the purpose of rodding.

Section 314. Size

Cleanouts shall be of the same nominal size as the pipes up to 4" and not less than 4" nominal for larger piping.

Section 315. Section of Flow

Every cleanout shall be installed so that the cleanout opens opposite to the direction of the flow of the drainage system.

Section 316. Change of Direction

Cleanouts shall be installed at each change of direction of the drainage system 45° or greater except not more than one shall be required in every 40 feet of run unless required by Section 311 above.

CHAPTER 4: PIPE

Section 410. House Sewers

Pipe for house sewers up to 4" in diameter may be ABS or PVC.

Section 420. Sewer Mains

Pipe for new sewer mains shall be PVC SDR 35 or heavier.

CHAPTER 5: SEWER STRUCTURES

Section 510. Manholes

Manholes shall be standard 4' diameter with a 2' diameter cast iron cover. Manholes may be either reinforced concrete or fiberglass reinforced plastic (FRP) and will be capable of supporting an H-20 wheel loading when installed.