



MONTARA WATER
AND SANITARY DISTRICT
SERVING MONTARA AND MOSS BEACH

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OVERVIEW OF MWSD REQUIREMENTS FOR
BUILDING A NEW HOME

The Montara Water and Sanitary District (MWSD) has certain requirements for building a new home within the urban portion of its service area. The following is meant to be a general guide for use by the homeowner and their architect and/or contractor building the house.

GENERAL INFORMATION

A district "Sewer Connection Permit" is required in order to hook up to the District's sewer system. A copy of the application and information on fees is attached for your convenience. In addition, a flow chart is attached to help you understand the procedure that is required to obtain a Building Permit from the County of San Mateo.

Additional Requirements There are additional requirements for properties listed below which staff can explain in more detail.

- Property located in the Seal Cove area
- Property requiring a sewer main extension in order to be served

Sewer Laterals The property owner is responsible for constructing and maintaining the sewer lateral that extends from the house to the District's sewer main in the street. The District has minimum requirements for these laterals as does the County of San Mateo. **Please coordinate placement of sewer lateral with County Environmental Health Services Division early in the design process (363-4798). They are responsible for insuring proper separation between sewer laterals and wells in accordance with County and State requirements.**

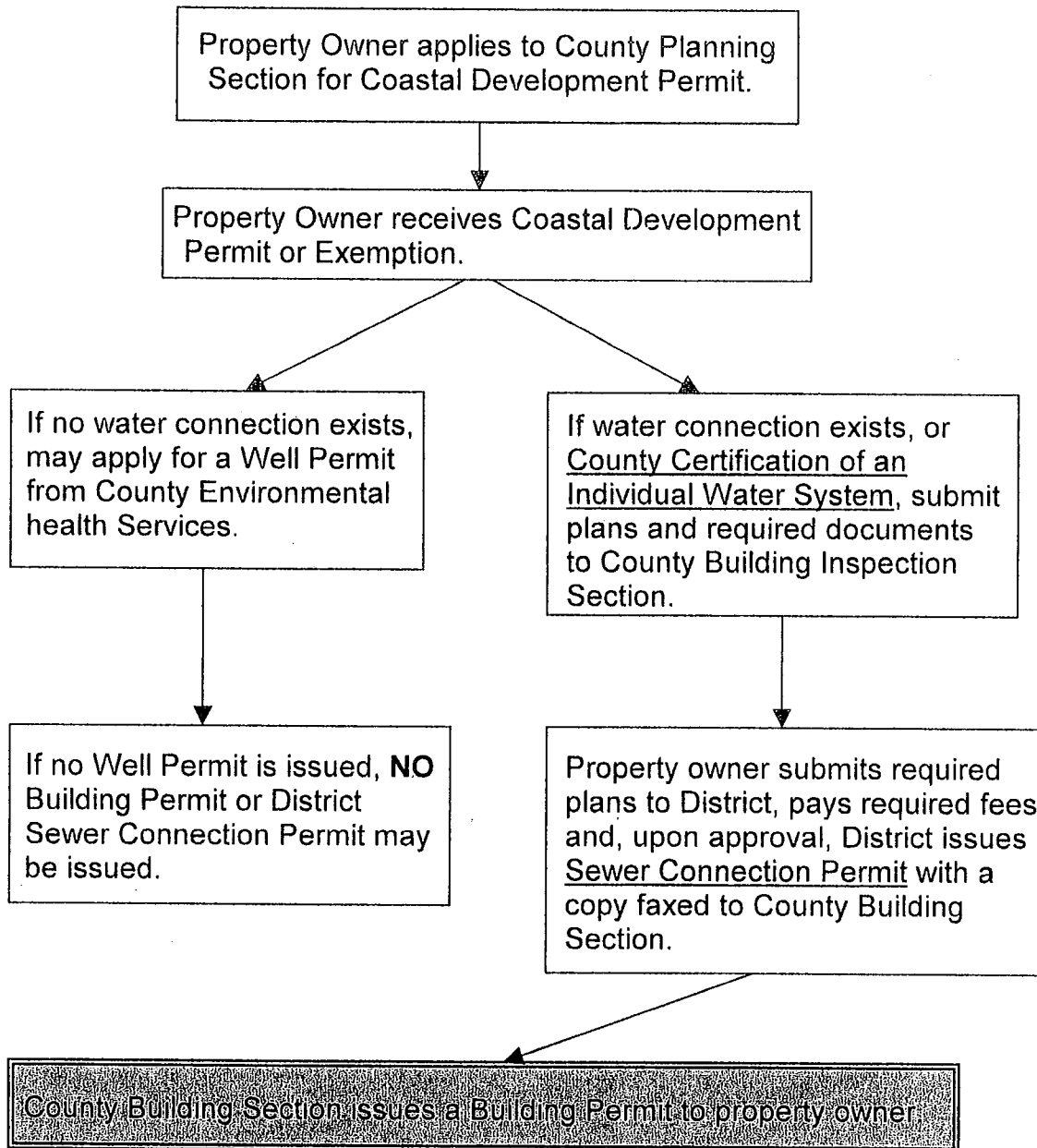
Obtaining a Sewer Connection Permit **Part of the information you must provide to the District in order to obtain a "Sewer Connection Permit" is one set of plans.** These plans must show location of proposed structure, floor plans showing plumbing fixtures, location of sewer lateral, location of cleanouts, elevation of lowest drain, elevation of upstream manhole, location of sewer pump (if needed), and location of check valve (if needed). A summary of these and other design and construction requirements are shown in the attached sheet and discussed more fully in the District's Standard Specifications. *The County of San Mateo does not forward to us any of the plans that you have given them.*

Length of Permits "Sewer Connection Permits" are issued for a specific property and may not be transferred to another property. **Permits are generally void after one year.**

Prohibited Connections There are some items that should not be connected to the sewer system including roof or yard drains and septic tanks. Section 3-7.100. Drainage Into Sanitary Sewers Prohibited. No leaders from roofs and no surface drains for rainwater shall be connected to any Sanitary Sewer. No surface or storm water, seepage, cooling water or unpolluted industrial process waters shall be permitted to enter any Sanitary Sewer by any device or method whatsoever."

MONTARA WATER AND SANITARY DISTRICT

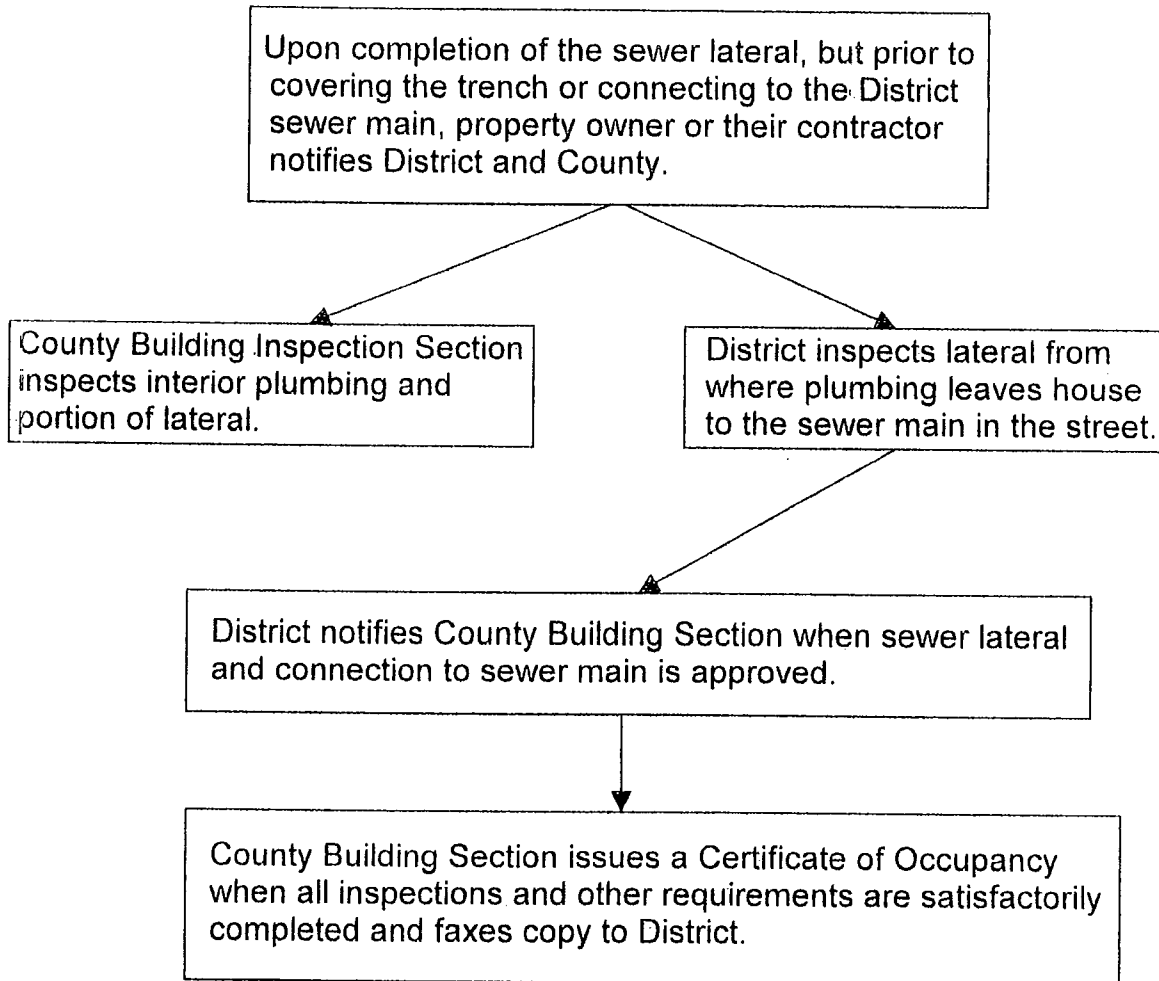
Procedures for Obtaining a District Sewer Connection Permit



Note: Plans should show the location of sewer lateral, number of fixture units, finish floor elevation of lowest drain and elevation of nearest upstream manhole. See District Standard Specifications for design standards and details.

MONTARA WATER AND SANITARY DISTRICT

Procedures AFTER Issuance of District Sewer Connection Permit



Frequently Called Numbers

Agency	Phone Number	Address
Montara Water and Sanitary District	(650) 728-3545 Fax: (650) 728-8556	8888 Cabrillo Hwy, Montara
County Planning Section	(650) 363-4161	455 County Center, RC
County Building Section	(650) 599-7311	455 County Center, RC
Envir. Health Services	(650) 363-4305	455 County Center, RC

FIXTURE	NUMBER OF FIXTURE UNITS
Bathtub (with or without shower over)*	2
Bidet	2
Dishwasher	2
Laundry tub or clothes washer (each pair of faucets)	2
Shower	2
Sink—bathroom	1
Sink--bar	1
Sink—kitchen	2
Sink—kitchen with disposal	3
Spa or hot tub (if drains into sewer)	2
Toilet (water closet, flush tank)	3

NOTE: This table refers to fixture units for single-family residential construction and is not intended for commercial or public projects. It is based on Table 10-1, Uniform Plumbing Code, 1991 Edition and Montara Sanitary District Engineer determinations. *If bathtub and shower are separate each is counted separately.

What is a fixture unit?

A fixture unit is a measurement used by the Uniform Plumbing Code to describe the relative potential water use of various plumbing fixtures. This measurement is used to assess the potential of various such fixtures to produce water or waste that goes down the drain and is eventually treated by the sewage treatment plant located in Half Moon Bay. Fixture units that are not connected to the sewer system such as outside faucets used for landscaping are not counted.

Why am I being charged for fixture units?

This District, along with Granada Sanitary District and the City of Half Moon Bay, must pay for its share of the sewage treatment plant expansion. The District's share of the plant expansion is about \$ 5 million and makes it possible for property owners to remodel or build new homes. During the past ten years no one could do so because of the lack of additional sewage capacity. The District, by charging for fixture units, will pay for its share of this plant expansion. If the plant had not been expanded, no remodeling which added fixture units would be permitted.

The other two agencies have assessment district which charge all property owners for a share of the sewage treatment plant expansion whether they ever use it or not. By contrast, the District's assessment district was challenged in court and held invalid. The only other means of paying for the District's capacity is a pay-as-you-go system in which property owners pay for the additional sewer

connections and fixture units as they build. The District had to participate in the sewer plant expansion because the State Water Quality Control Board issued a Cease and Desist Order against it. The Board required the expansion because the plant could not handle existing sewage flows during wet weather (November through April), and occasionally released sewage into the Pacific Ocean that could not be fully treated.

I use very little water, so these fixture-unit charges seem unfair

Fixture units are a representation of what the property could potentially use and not the actual water use. In other words, a small home with twelve fixture units would and generally does use less water than a large home with 35 fixture units. The capital costs to initially build and expand the sewage treatment plant are paid for by connection charges based on fixture units. The use of fixture units measures the potential future use of the home and not the actual use at any one time.

This is different from the District's annual Sewer Service Charge that is based on the actual water use of each home. Sewer Service Charges pays for the on-going operations, maintenance and repairs of the existing sewer system (pipes, pump stations and operating the sewer plant), and not the initial construction costs.

What if I decide not to get a building permit and do the work without a permit?

Recent real estate law and court cases make full disclosure by the realtor and homeowner a requirement as part of buying or selling a house. An informed buyer will want proof that all additions and other remodeling was done legally by building permit. If you fail to make full disclosure, you and your realtor may be liable for civil damages for any injuries or loss of property that occurred because the remodeling was not done in accordance with applicable laws and ordinances. In addition, if you have a fire or other insurable loss to your structure, the insurance company may refuse to pay for any or a portion of your loss that was done without proper permits or that was caused by improper construction practices.

DESIGN AND CONSTRUCTION REQUIREMENTS FOR NEW HOME CONSTRUCTION

The full requirements for the design and construction of all sewer laterals and other items connected to the District's sewer system are set forth in the District's Standard Specifications. The following highlights some of the requirements.

DESIGN REQUIREMENTS

Separate Sewers. Each structure requiring sewer service must be separately and independently connected to the main sewer. Upon application, the District may grant an exception where multiple structures on one lot cannot be subdivided.

Pipe Size and Slope. The minimum size of pipe for sewer laterals (also called "side sewers") is 4-inch inside diameter. The minimum slope is 1.0 feet per 100 feet (1.0%).

Pipe Cover. The minimum cover over the top of a lateral must be three feet. If less cover is used, pipe with greater strength than PVC Schedule 40 must be used along with other requirements specified by the District Engineer.

Pipe Materials. The District does not allow Vitrified Clay Pipe (VCP) to be used because of its propensity to crack. In standard situations PVC Schedule 40 pipe is acceptable. Table 1 lists all of the approved side sewer or lateral pipe material.

Cleanouts. Cleanouts must be installed at the following locations: a) at the junction of the building plumbing and the side sewer (two feet or less outside the building); b) at each bend or change in direction of the side sewer greater than 45° (1/8 bend); and c) where a run of pipe without bends exceeds 90 feet. All cleanouts, except the flow off cleanout, must be brought to grade, properly capped, and completely watertight.

Backwater Prevention Device. If there is an obstruction in the sewer main sometimes the sewage will backup below that obstruction and may flow into a house. This device allows sewage to flow through it before reaching the house. The details are shown in SD 6 in the Standard Specifications. The elevation of the overflow rim of this device must be at least 3" above finish grade, and at least 6" below the lowest plumbing fixture. In driveways or other paved areas, a line must be installed to the side from a wye to the backwater prevention device. If this installation is not feasible, a check valve must be installed in the side sewer ahead of the backwater prevention device in accordance with SD 7 of the Standard Specifications.

Check Valve. If the difference between the elevation of the lowest fixture and the backwater prevention device is less than 6", a check valve shall be installed between the backwater prevention device and the house (see SD 7 in Standard Specifications). It is the homeowner's responsibility to have these elevations measured to determine whether or not such a device is necessary. Without this device, backed up sewage will flow into the home and would not flow out of a backwater prevention device since the lowest drain is below the upstream manhole in the street.

Sewer Pumps. When gravity service is not feasible, special application may be made to the District to allow installation of a sewer ejector pump system. Please consult the Standard Specifications for the details of the District requirements. Each property owner is responsible for purchasing and maintaining his or her own pump.

Taps into District Sewer. Tap connections to the main sewer, when permitted, must be made in the presence and at the direction of a District Inspector. Subject to approval of the District, connections must be made as follows: a) 6-inch or less diameter main sewers – a wye or tee; b) 8-inch or more diameter main sewers—"Tap Tite" or equal pipe penetration-type connection.

Existing Side Sewer or Laterals. A new structure is not permitted to connect to an old side sewer unless the old one is tested in the presence of District Inspector, and found to meet all current District requirements, including installation of a backwater prevention device. The property owner must pay all costs for examination and testing.

CONSTRUCTION REQUIREMENTS

Laying Pipe. Install lateral pipe the shortest route from the building plumbing outlet to main sewer connection. All pipe must be laid to line and grade. Each length of pipe must be laid on a firm bed as detailed in SD 4 in District's Standard Specifications, and must have full bearing for its entire length between bells. When applicable, an adequate bell hole must be dug at the end of each pipe length for making the joint. Blocking under the lateral will not be permitted. The inside edge of any cut pipe must be beveled, and both bell and spigot must be marked for proper inspection and cleaned before the joint is made. Care must be taken to prevent foreign materials from entering the pipe. Water must be pumped from the trench while the pipes are laid and the joints made. Backfill must be carefully and uniformly placed around the pipe with no rocks or clods touching the pipe. In rocky areas, imported bedding material may be required. Pipe must not be covered until inspected by District Inspector.

Inspections. Prior to backfilling, District Inspector must inspect lateral installations and modifications. When required, test for water tightness must be done in the presence of District Inspector. Connections to the main sewer must be done in the presence of District inspector. Inspections must be scheduled with the District giving three working days advance notice. Inspections are not made on Saturdays, Sundays or holidays.

Excavation and Backfilling Trenches. An encroachment permit is required from the agency maintaining the street. Trenches for laterals within public streets must be excavated and backfilled, and the pavement restored in accordance with the regulations of the State of California, San Mateo County and/or other agency having jurisdiction over the street. The contractor or property owner must pay the cost of compaction test. Consult the District's Standard Specifications for requirements for trenches in slopes.

Testing of Gravity Sewers. Unless otherwise directed by the District, laterals must be tested by plugging and filling with either water or compressed air to 4 p.s.i. For water tests, leakage must not exceed 50 gallons per day per inch of internal diameter per mile of sewer line tested (0.16 gallons per hour per 100 feet of 4" diameter pipe). For air tests, the pressure must not drop more than 1 p.s.i. over a three minute period. Tests must be performed in the presence of District Inspector.

Special Conditions. When encountering special conditions that are not covered by the District's Standard Specifications or Code, the District Engineer will direct the contractor or property owner on the required procedures.

References

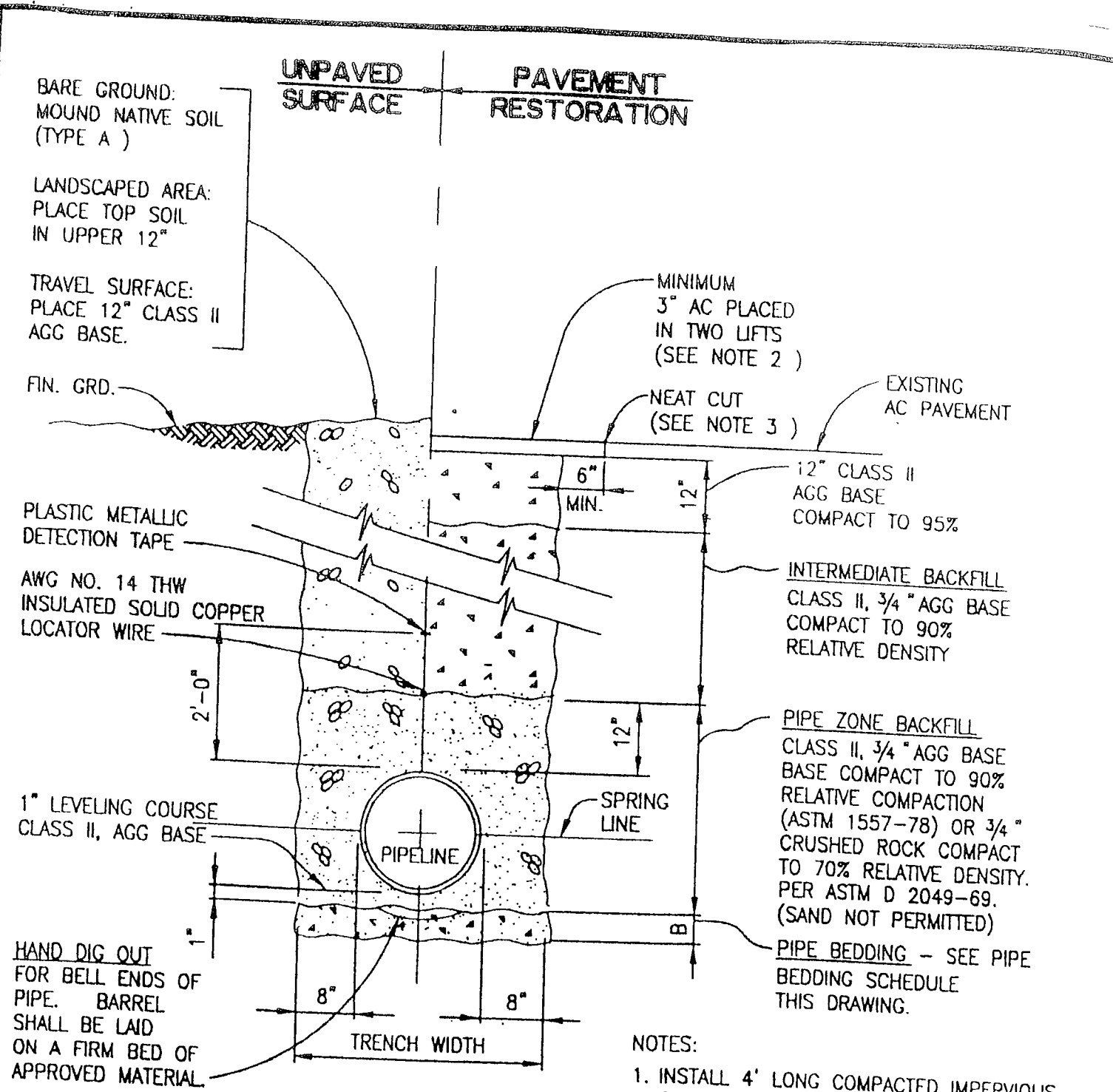
Table 1, Private Side Sewer/Lateral
SD 4, Typical Trench Section
SD 5, Typical Side Sewer Details
SD 6, Standard Cleanout and Backwater Prevention Device
SD 7, Backwater Check Valve and Shutoff System

TABLE 1
PRIVATE SIDE SEWER/LATERAL
(Specific Use Subject to District Approval)

<i>Pipe Specifications</i>	<i>Can be used for Gravity Sewers</i>	<i>Can be used for Ejector Pump Discharge Pipelines</i>
Vitrified Clay Pipe (No Hub), VCP	No	No
Cast Iron Soil Pipe (No Hub), CIP	Yes ²	No
Ductile Iron Pipe w/Rubber Ring Joints, DIP	Yes ²	No
PVC ASTM D-2241, SDR=26	Yes ¹	Yes ¹
PVC AWWA C-900, SDR=21	Yes ²	Yes ²
PVC Sch 40	Yes ¹	Yes ¹
PVC Sch 80	Yes ²	Yes ²
Polyethylene, Min SDR-17	Yes ¹	Yes ¹

¹ Requires minimum 3-foot cover with imported bedding and pipe zone backfill.

² Requires minimum 18-inch cover on private property with imported bedding and pipe zone backfill or shaded with select native material containing rocks no larger than 1" sieve size.



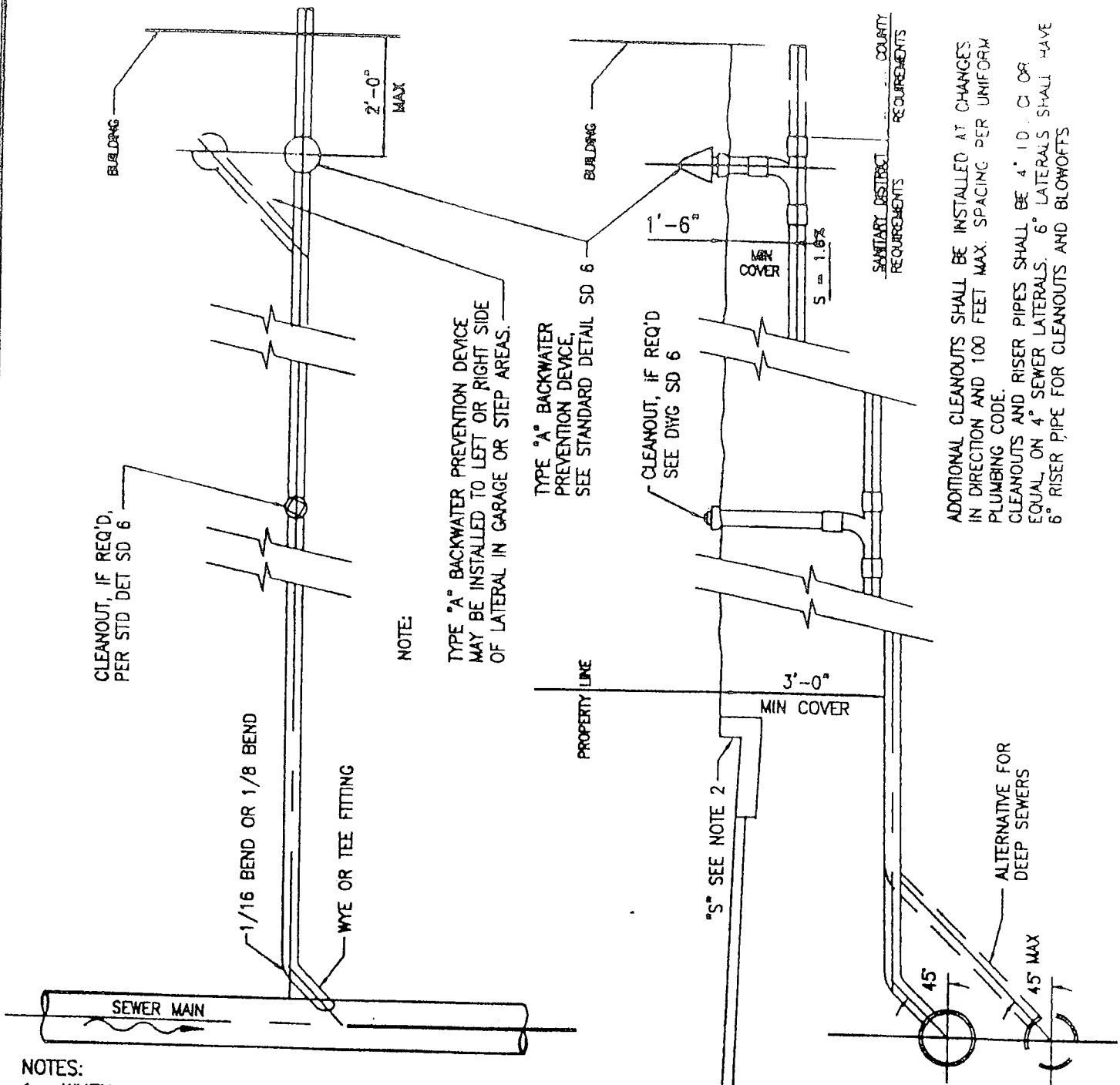
PIPE BEDDING DETAIL

PIPE BEDDING SCHEDULE		
TRENCH MATERIAL	BEDDING DEPTH - 8	BEDDING MATERIAL
SOIL - DRY	6"	3/4" CRUSHED ROCK OR CLASS II, AGG BASE
SOIL W/ WATER	12"	1 1/2" CRUSHED ROCK
ROCK OR HARD PAN - DRY	6"	3/4" CRUSHED ROCK OR CLASS II AGG BASE
ROCK OR HARD PAN W/ WATER	6"	1 1/2" CRUSHED ROCK
BAY MUD	SEE BAY MUD TRENCH DETAIL DRAWING SD 4.1	

NOTES:

1. INSTALL 4' LONG COMPACTED IMPERVIOUS CLAY PLUGS IN PIPE ZONE BACKFILL AND PIPE BEDDING AT 400' INTERVALS.
2. ASPHALT THICKNESS SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY WITH JURISDICTION OVER STREET.
3. CONSULT LOCAL JURISDICTION FOR ASPHALT CUTTING REQUIREMENTS.

TYPICAL TRENCH SECTION

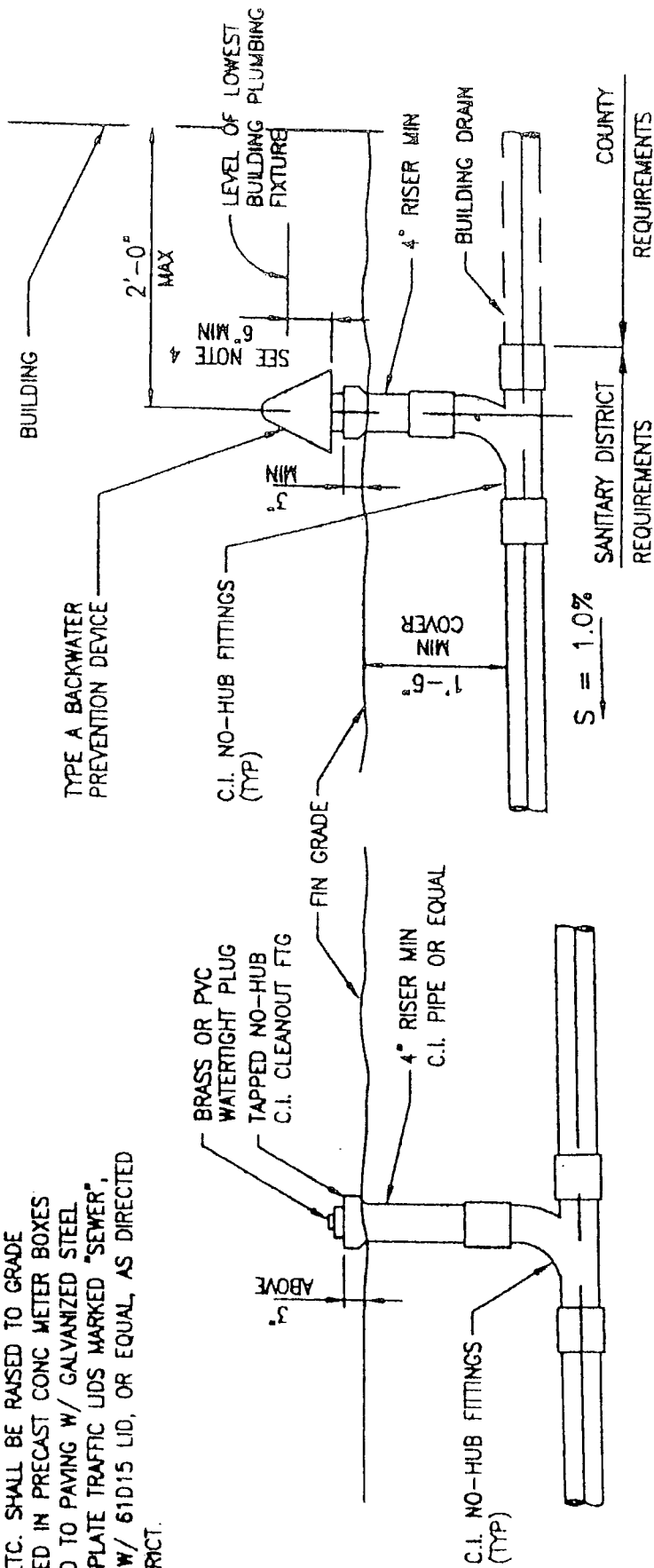


NOTES:

1. WHEN A LATERAL SEWER IS INSTALLED IN ADVANCE OF THE BUILDING SEWER, IT SHALL BE TERMINATED AT OR NEAR THE PROPERTY LINE. THE END OF THE LATERAL SHALL BE MARKED WITH A 4" x 4" REDWOOD STAKE, PAINTED GREEN, FROM THE TOP OF THE PIPE TO A MINIMUM OF 6" ABOVE THE FINISHED GROUND SURFACE.
2. WHERE CONCRETE CURBS AND GUTTERS EXIST OR ARE TO BE A PART OF AN IMPROVEMENT, EACH SIDE SEWER SHALL BE PERMANENTLY LOCATED BY IMPRINTING OR CHISELING AN "S" (3" size) IN THE FACE OF THE CURB VERTICALLY ABOVE THE SEWER PIPE.
3. BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY THE DISTRICT.
4. TYPE A BACKWATER PREVENTION DEVICE (CONTRA COSTA RELIEF VALVE, ALSO KNOWN AS MUSHROOM CAP) SHALL BE INSTALLED ON A 4" MINIMUM RISER PIPE NOT MORE THAN 3' FROM BUILDING WALL, PER STANDARD DETAIL SD6.
5. LATERAL TRENCHES IN AREA OF PUBLIC STREET CURB, GUTTER AND SIDEWALK SHALL BE COMPACTED THE SAME AS TYPICAL TRENCH DETAIL SD 4. AREAS AROUND NEW CONCRETE CLEAN-OUT BOXES SHALL BE SOILS TESTED TO 90% COMPACTED. CONTRACTOR IS TO USE WHATEVER MEANS NECESSARY TO ACHIEVE 90% COMPACTION

TYPICAL SIDE SEWER DETAILS

CLEANOUTS LOCATED UNDER PAVED DRIVEWAYS, WALKWAYS, ETC. SHALL BE RAISED TO GRADE AND INSTALLED IN PRECAST CONC METER BOXES FLUSH FITTED TO PAVING W/ GALVANIZED STEEL CHECKERED PLATE TRAFFIC LIDS MARKED "SEWER", CHRISTY B9 W/ 61D15 LID, OR EQUAL, AS DIRECTED BY THE DISTRICT.



STANDARD CLEANOUT

TYPE A BACKWATER PREVENTION DEVICE

DEVICE

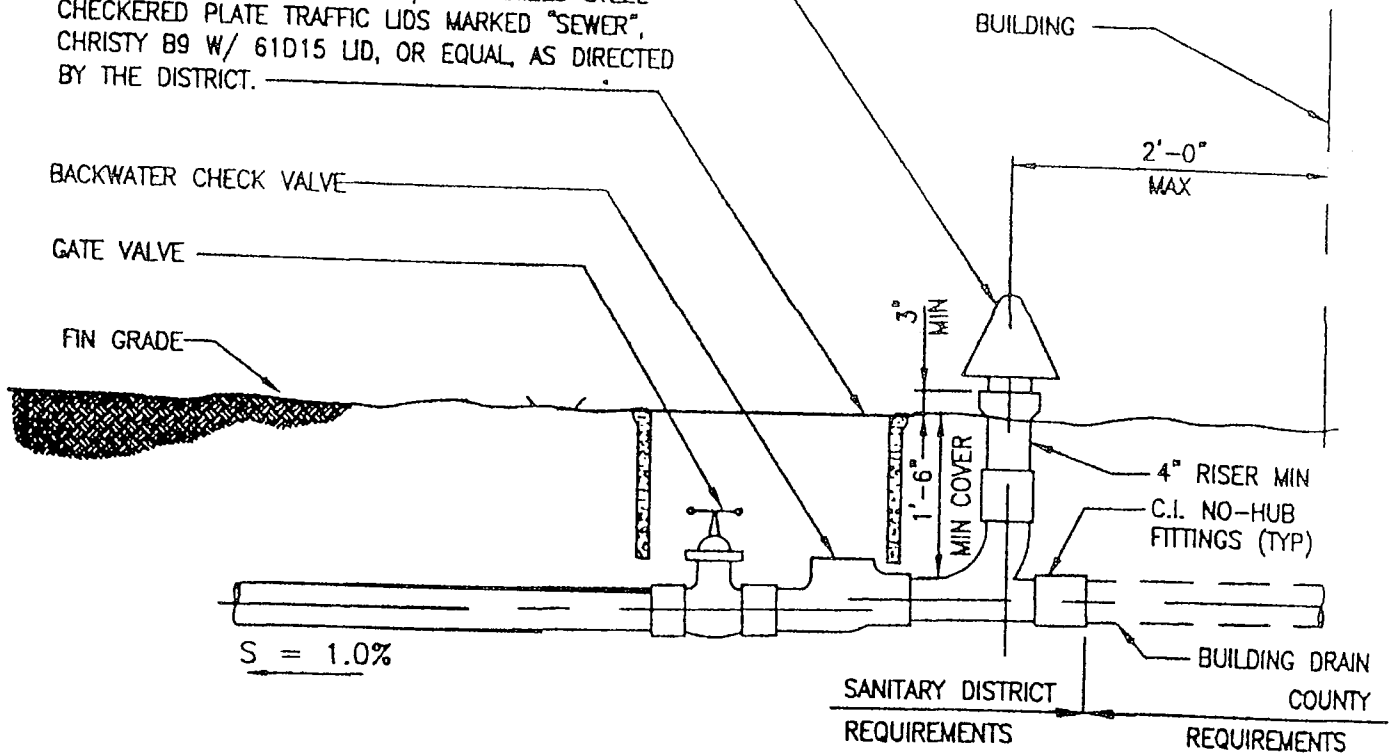
NOTES:

1. A STANDARD 4" C.I. CLEANOUT IS THE MINIMUM DISTRICT REQUIREMENT.
2. A BACKWATER PREVENTION DEVICE IS REQUIRED AND SHALL BE INSTALLED ON ALL SIDE SEWERS.
3. A TYPE "A" BACKWATER PREVENTION DEVICE SHALL BE INSTALLED IN A LOCATION WHERE SEWAGE CAN OVERFLOW ON THE SURROUNDING AREA WITHOUT DAMAGE TO PROPERTY.
4. IF THE DIFFERENCE IN ELEVATION OF THE LOWEST FIXTURE AND THE TYPE "A" BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A BACKWATER CHECK VALVE SHALL BE INSTALLED AS SHOWN IN STANDARD DETAIL SD 7.

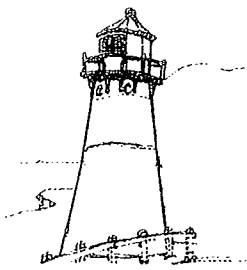
STANDARD CLEANOUT AND BACKWATER PREVENTION DEVICE

TYPE A BACKWATER PREVENTION DEVICE,
SEE STANDARD DETAIL SD 6

VALVES SHALL BE INSTALLED IN PRECAST CONCRETE
VALVE BOXES FLUSH FITTED W/ GALVANIZED STEEL
CHECKERED PLATE TRAFFIC LIDS MARKED "SEWER",
CHRISTY B9 W/ 61D15 LD, OR EQUAL, AS DIRECTED
BY THE DISTRICT.



**BACKWATER CHECK VALVE
AND SHUTOFF SYSTEM**



MONTARA WATER
AND SANITARY DISTRICT
SERVING MONTARA AND MOSS BEACH

APPLICATION FOR SEWER CONNECTION PERMIT

Single Family Residence Multiple Family Commercial Other

Assessor Parcel Number: _____ Lot No. _____

Address of Property: _____

PROPERTY OWNER

Owner Name: _____

Mailing Address: _____

Phone: (____) _____ Fax Number: (____) _____

E-Mail Address: _____

OWNER'S AGENT

Agent's Name: _____

Mailing Address: _____

Phone: (____) _____ Fax Number: (____) _____

E-Mail Address: _____

Please answer the following about your property:

	Yes	No
Do you need a Sewer Line Extension to connect to District main?		
Have you received a County Coastal Development Permit or Exemption?		
Is property located in the Seal Cove area?		
Have you received a Well Permit from the County Health Dept.?		
Does your property have a water meter?		
Does your property have a septic system?		
Have you ever paid a Sewer Service charge for this property?		

APPLICATION FOR SEWER CONNECTION PERMIT (Cont'd)

Indicate the Number of Facilities the Structure Will Have:

Number of Bedrooms		Number of Bathrooms	
Garbage Disposal		Spa	
Dishwasher		Laundry	
Others:			

Comments: _____

AGREEMENT

In consideration of approval of this application, the undersigned agrees:

- To comply with all pertinent provisions of the ordinances, rules and regulations of the District and of the County of San Mateo.
- To conform construction permitted by the District to that described in the plans and specifications approved by the District or to other requirements specified by the District, together with such corrections or modifications thereto expressly permitted or made by the District.
- All of the information submitted in or with this application is true and accurate to the best of my knowledge.
- Comply with and record compliance in accordance with MWSD Ordinance No. 127 (attached).

Signed: _____ Date: _____
 (Owner)

DISCLAIMER: The submittal of an application for a sewer connection permit or for any other service or entitlement from the District does not guarantee connection to the District's facilities or the provision of such service or use of such facilities. The applicant is responsible for complying with all pertinent provisions of ordinances, rules, and regulations of the District and the County of San Mateo. No right or entitlement to connect to, or use, any of the District's facilities, or receive service from the District, is acquired by the submittal of an application. Once a permit is issued, the entitlements authorized thereunder are strictly limited to the terms and conditions of the permit and all pertinent provisions of the District's ordinances, rules and regulations.

MONTARA WATER AND SANITARY DISTRICT

District Fees Required To Build A House

Effective July 2010

The following is a summary of some of the charges contained in the District's Master Fee Schedule that apply to construction of a single family residential structure:

- **Connection Permit Administrative Fee:** **\$419**
(This pays the cost to process your Connection Permit)

- **Sewer Connection Permit:** **\$20,739**
(This pays for your share of the recent sewer plant expansion and a buy-in charge for the existing sewer pipes, pump stations and a portion of the sewage treatment plant.)

- **Connection Permit Inspection Fee:** **\$396**
(This pays the inspection costs to make sure your connection to the District's sewer system is done properly.)

- **Excess Fixture Units:** **\$830/ea**
(In excess of the 25 fixture units allowed under the sewer permit.)

- **Engineering Review:** **\$2,269**
(This pays the cost for the District Engineer to review your plans and certify that all conditions to connect to the system have been met.)

- **Pro-Rated Sewer Service Charge:** **\$60.72**
(New connections will receive a pro-rated bill for sewer service charges prior to the District's final sign-off. The total of the bill is equal to \$58.31 per month for each month remaining in the fiscal year. Sewer charges for subsequent years will be based on usage.)

Note: For details consult the District's Master Fee Schedule and Code.