RANCHO MURIETA COMMUNITY SERVICES DISTRICT
RESIDENTIAL BUILDING SEWER & WATER REQUIREMENTS

This is a quick reference guide and does not replace requirements in the District's Standards & Code

Building Sewer Materials

The building's sewer line, beginning three feet (3') from any building or structure, shall be four inch (4") sdr 35 or 26 P.V.C. pipe for a single service, and six inch (6") sdr 35 or 26 P.V.C. pipe for a double service. Any substituted material must be approved in advance and in writing by the Rancho Murieta Community Services District (District).

Sewer Grade (slope)

Building sewers shall be run in practical alignment and at a uniform slope of not less than one-fourth of an inch (1/4") per foot toward the point of disposal; provided that where it is impractical to obtain a slope of one-fourth of an inch (1/4") per foot, any such pipe may have a slope of not less than one-eighth of an inch (1/8") per foot with prior written approval by the District.

Sewer Cleanouts

A. A two-way cleanout shall be provided at the beginning of the building's sewer and shall be no less than three feet (3') or no more than six feet (6') from any building or structure including overhang. See District Standard drawing S-13 attached for reference.

B. The cleanout shall be installed two feet (2') back of the sidewalk in the direction of flow or at the easement line if the service is located within a side or back of lot easement. A concrete or PVC box shall be set to finish grade of the property. The cleanout and service shall be of like material and diameter. For details, see Standard Drawing N. S-10.

C. A cleanout shall be installed within the subscribed property line where practicable.

D. Cleanout shall be placed in every building sewer at intervals not to exceed one-hundred feet (100') in straight runs.

E. Every change in alignment or grade in excess of twenty-two and one-half (22½) degrees in a building sewer shall be served by a cleanout, except that no cleanout shall be required for changes in direction, not to exceed one (1) forty-five (45) degree change of direction or one (1) forty-five (45) degree offset.

F. Each cleanout shall be installed so that it opens in a direction opposite to the flow of the soil or waste or at right angles thereto, and except in the case of "wye" branch and end-of-line cleanouts, vertically above the flow of the pipe.

G. All cleanouts shall be made accessible by yard boxes with cover exposed approximately two inches (2") above grade. Use Brooks Products, Inc., No 36 or 1 RD box or equal marked "sewer".

H. Planting of shrubs or trees should be avoided near sewer lines or cleanouts to avoid roots intrusion which may cause sewer backups into the property.

I. District's responsibility for sewer system begins past the installation of the last cleanout, typically at connection to sewer main line.

Sewer and Water Pipes

A. Water and sewer lines cannot be run together in the same trench and must be made to keep a ten foot (10') separation.

B. The bottom of the water piping at all points shall be at least twelve inches (12") above the top of the sewer piping.

C. Refer to District Standard Drawing S-13 for sewer pipe bedding and backfill requirements.

D. At no time should debris of flows be allowed to enter the sewer collection system prior to final inspection by the District.

Water Service Line

Water service lines shall be one inch (1") copper tube size polyethylene pipe with a 200 psi rating meeting AWWA standard C901. Other materials or sizes *may* be used with District's prior written approval. A minimum of eighteen inches (18") of cover must be provided for service line, bedded in utility sand.

No services shall be located in or under driveways unless approved in advance and in writing by District.

District's responsibility terminates at discharge end of water meter. See District Standard drawing W-1A "Water Service Detail" attached for reference. Meter and service line to it are an easement to provide water service and are to be maintained by property owner per District Code.

Where water service lines are installed by the open cut method, the service line trench shall be backfilled in the same manner as the water main trench except, however; service line trenches crossing an existing street shall be completely backfilled with sand, to an elevation of six inches (6") minimum over the top of the service pipe.

Water Meters

The District requires 1" Sensus Iperl meters to be installed at residential connections, ¾" meters at mobile village and townhomes. Exceptions to this must be approved by the District prior to

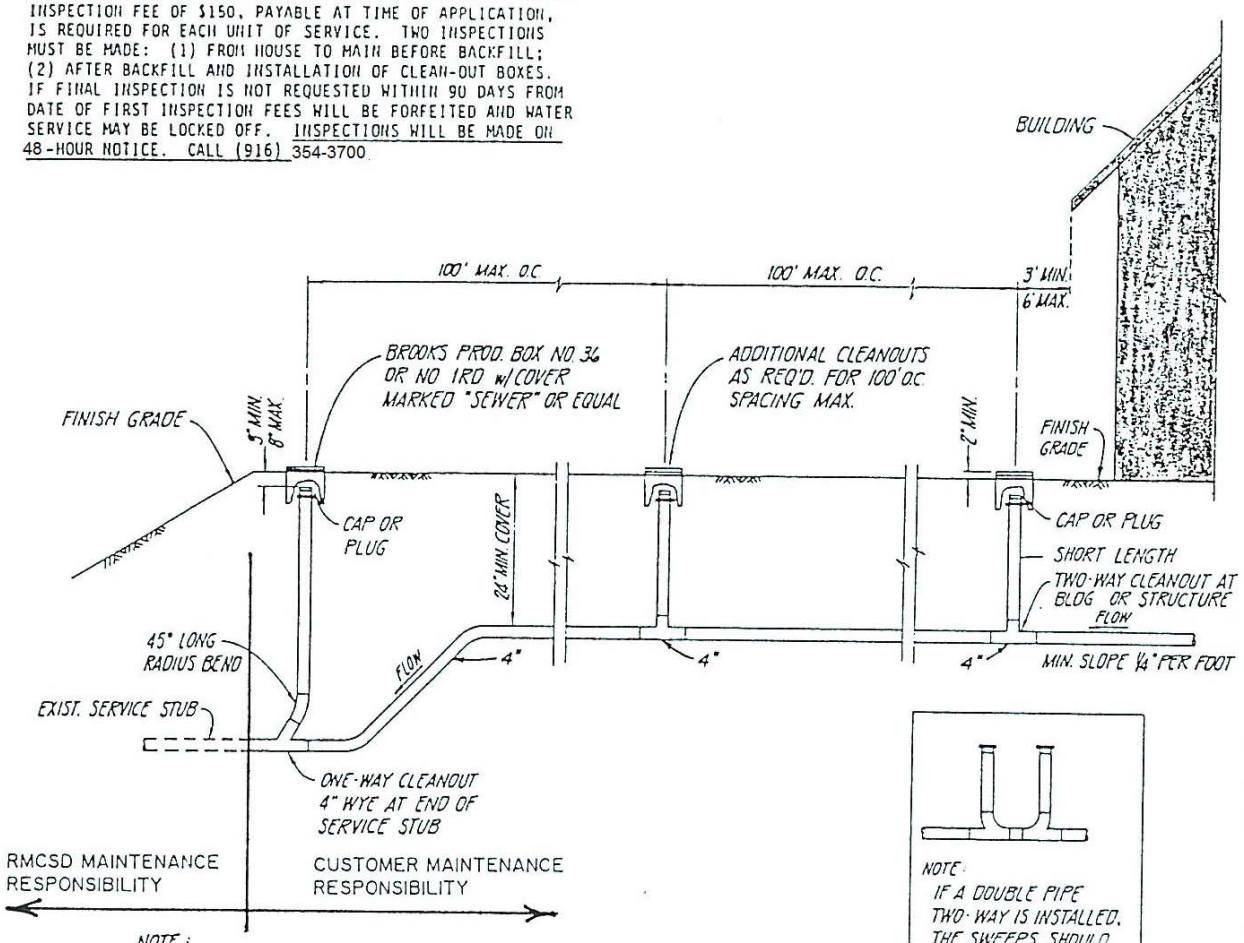
installation. *See District Code Chapter 14 for details.* The customer shall, at the customer's own expense, install according to District standards, the customer's private water line.

Inspection

It shall be the duty of the applicant or the person doing the work authorized by the applicant to notify the District office, orally or in writing, that said work is ready for inspection. Such notification shall be given not less than forty eight (48) hours (i.e., two full business days) before the work is requested to be inspected. It shall be the duty of the person doing the work to be on the job site with the District inspector. In no event will work be accepted that cannot be visually and CCTV checked. Email contacts for Director of Operations or Utility Supervisor may be found at: http://www.ranchomurietacsd.com/contact-us

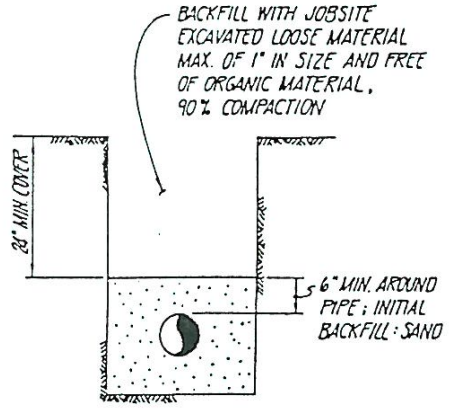
SEWER SYSTEM AND INSPECTION REQUIREMENTS

INSPECTION FEE OF $150, PAYABLE AT TIME OF APPLICATION, IS REQUIRED FOR EACH UNIT OF SERVICE. TWO INSPECTIONS MUST BE MADE: (1) FROM HOUSE TO MAIN BEFORE BACKFILL; (2) AFTER BACKFILL AND INSTALLATION OF CLEAN-OUT BOXES. IF FINAL INSPECTION IS NOT REQUESTED WITHIN 90 DAYS FROM DATE OF FIRST INSPECTION FEES WILL BE FORFEITED AND WATER SERVICE MAY BE LOCKED OFF. INSPECTIONS WILL BE MADE ON 48-HOUR NOTICE. CALL (916) 354-3700



NOTE:
1. CAST IRON LIDS ON CLEANOUT WILL BE USED IN TRAFFIC AREAS.
2. ALL PIPE AND CLEAN-OUTS WILL BE 4".

NOTE:
IF A DOUBLE PIPE TWO-WAY IS INSTALLED, THE SWEEPS SHOULD BE DIRECTED TOWARDS EACH OTHER AS SHOWN



TRENCH DETAIL
NO SCALE

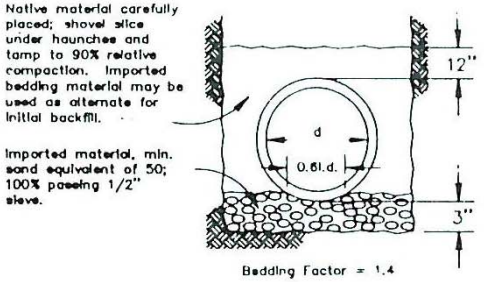
APPROVED BY:

RANCHO MURIETA COMMUNITY SERVICES DISTRICT

SEWER SERVICE DETAIL
ONE-WAY & TWO-WAY CLEANOUT
FULL SEWERAGE

Scale NONE
Date
Drawn By

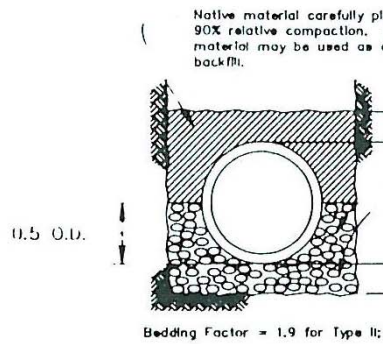
S-13



Bedding Factor = 1.4

TYPE I

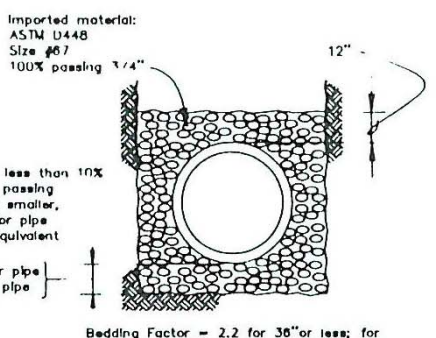
(This type of bedding is to be used only for 10 inch or smaller pipe unless written approval is granted by the



Bedding Factor = 1.9 for Type II;

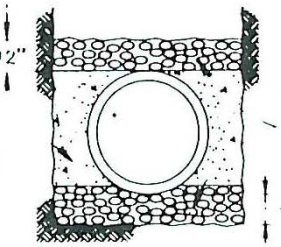
TYPE II

(See Note 6)



Bedding Factor = 2.2 for 36"or less; for greater than 36" dia. field condition only (see note 3).

TYPE II ALTERNATE

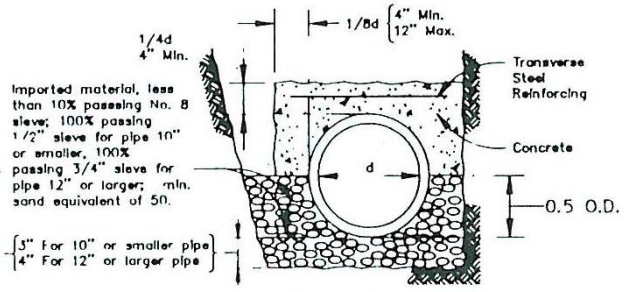


Bedding Factor = 2.3

TYPE III

(See Note 4)

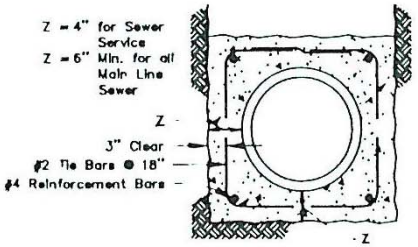
(Concrete must extend from pipe to the trench walls. Type III not allowed where soils are expansive)



Bedding Factor = 3.4
P = 0.4%

TYPE IV

(See Notes 4 & 5)



COMPLETE ENCASEMENT DETAIL

GENERAL NOTES:

1) See Sections SS12-01, 04 and 05 for backfill limits.

2) Minimum depth of bedding and material under pipe bells shall be 1 1/2 inches.

3) For Type II Alternate, bedding and initial backfill shall be crushed stone with a sieve analysis listed as Size #67 in ASTM Designation D448, except that 100 percent shall pass the 1/4 inch sieve. For pipe greater than 36" in diameter Type II Alternate shall be allowed only when field encountered construction conditions have resulted in the allowable trench width for Type II being exceeded and calculations must be submitted for the Engineer's approval to determine the appropriate bedding factor for the situation. Design Method No. 38 as published by the American Concrete Pipe Association shall be the basis for the calculations. Maximum allowable Bedding Factor is 2.2.

4) Types III and IV may be used only when construction conditions encountered in the field have resulted in the allowable trench width for Type II and Type II Alternate being exceeded. Written approval of the Engineer is necessary.

5) For reinforced concrete, P is the percentage of the area of transverse steel to the area of concrete above the top of the pipe barrel. Use wire mesh or uniformly distributed small diameter rebar.

6) For all flexible (non-rigid) pipe, imported material must be used for bedding and initial backfill to 12 inches over pipe bell.

7) Increase pipe bedding to 6" below pipe when rock or boulders are encountered.

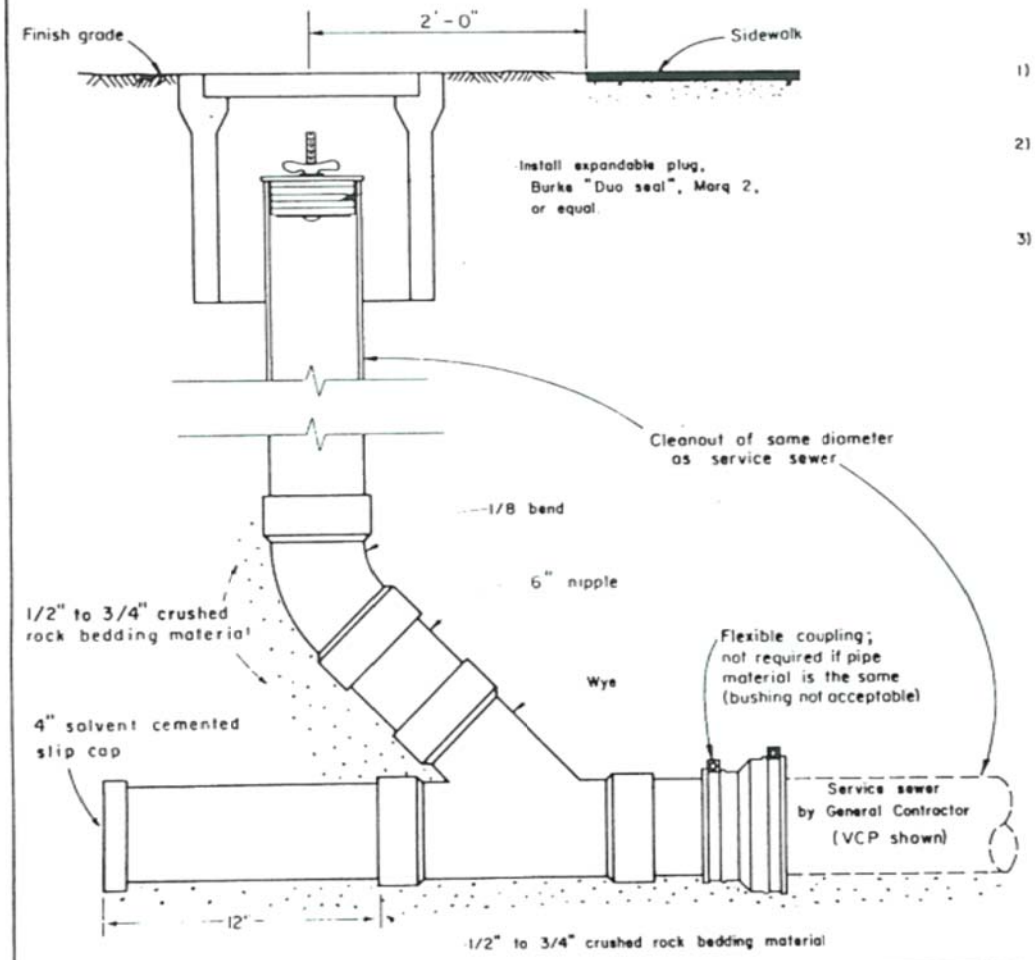
APPROVED BY:

RANCHO MURIETA
COMMUNITY SERVICES DISTRICT

SEWER PIPE BEDDING & INITIAL BACKFILL

NO SCALE
DATE:
DRAWN BY:

S-4



1) Cleanout to grade to be plastic DWV type PVC (ASTM D2665) or ABS (ASTM D2661) with solvent weld joints.

2) For 4" services, install round, non-traffic type, concrete or PVC valve box and cover, marked "Sewer". Box inside diameter to be a minimum of 7" and a maximum of 10".

3) For services 6" or larger, install round, concrete, traffic type valve box with cast iron cover. Cover to be marked "Sewer".

APPROVED BY:

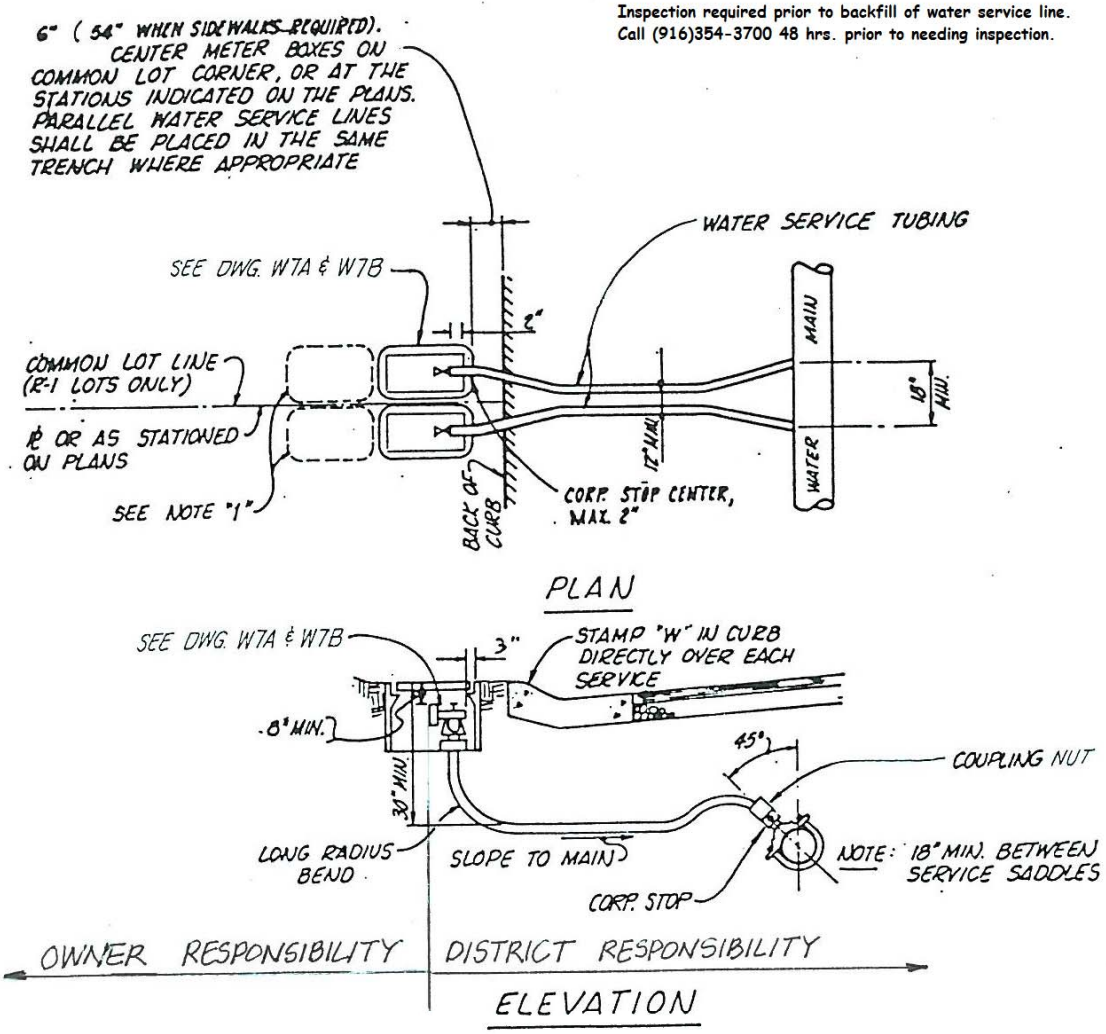
RANCHO MURIETA
COMMUNITY SERVICES DISTRICT

ABS OR PVC
CLEANOUT TO GRADE

NO SCALE
DATE
DRAWN BY

S-10

Inspection required prior to backfill of water service line.
Call (916)354-3700 48 hrs. prior to needing inspection.



NOTES

1. WHERE INDICATED ON THE PLANS THE CONTRACTOR SHALL PLACE A SECOND, IN LINE, METER BOX IF OWNER / ARCHITECT DETERMINES IF PLACEMENT OF PRESSURE REDUCING VALVE IS NEEDED

2. CONTRACTOR TO COORDINATE INSTALLATION OF WATER SERVICES WITH JOINT UTILITY TRENCH. JOINT UTILITIES WILL NOT BE ALLOWED IN WATER LINE TRENCH.

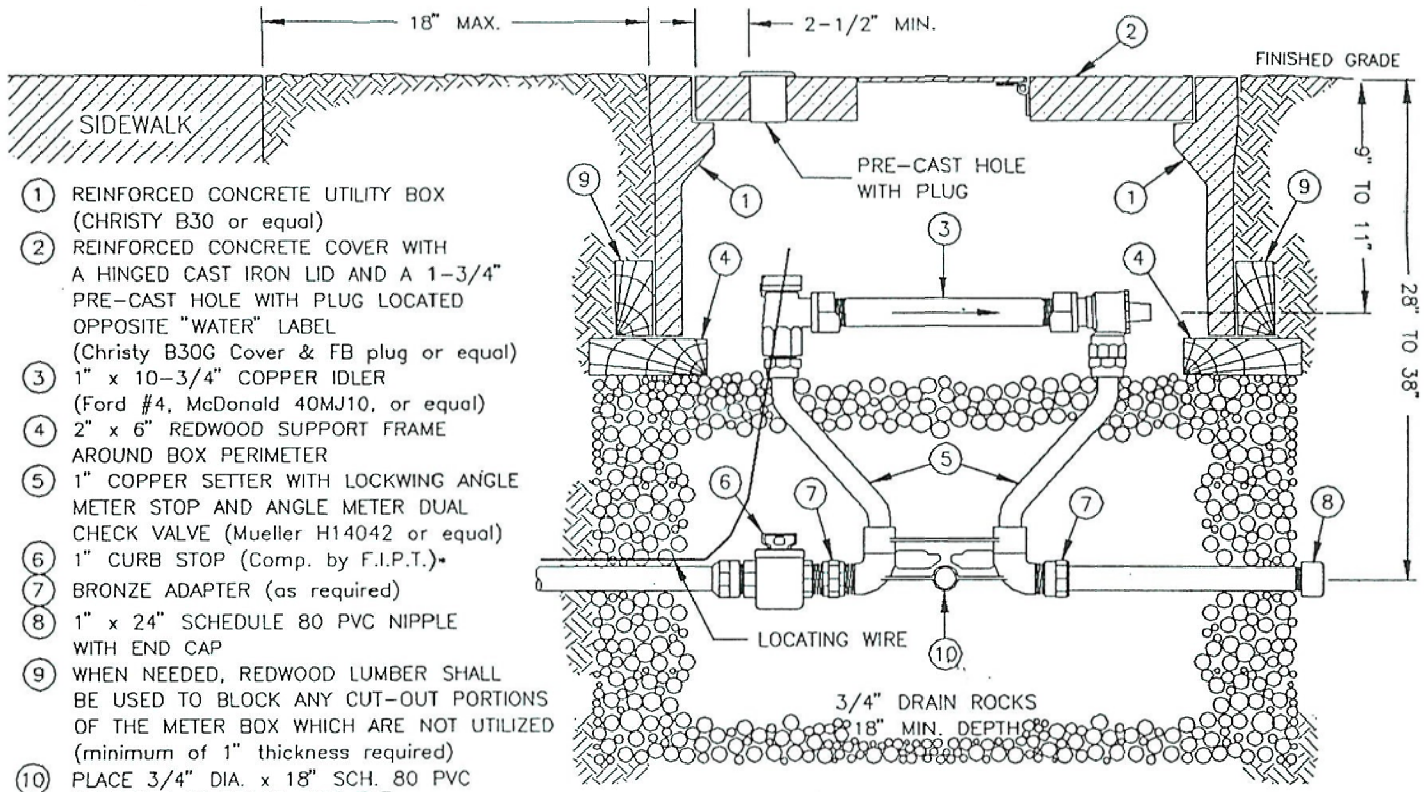
APPROVED BY:

RANCHO MURIETA COMMUNITY SERVICES DISTRICT

WATER SERVICE DETAIL

Scale NONE
Date
Drawn By

W-1A



1. REINFORCED CONCRETE UTILITY BOX (CHRISTY B30 or equal)
2. REINFORCED CONCRETE COVER WITH A HINGED CAST IRON LID AND A 1-3/4" PRE-CAST HOLE WITH PLUG LOCATED OPPOSITE "WATER" LABEL (Christy B30G Cover & FB plug or equal)
3. 1" x 10-3/4" COPPER IDLER (Ford #4, McDonald 40MJ10, or equal)
4. 2" x 6" REDWOOD SUPPORT FRAME AROUND BOX PERIMETER
5. 1" COPPER SETTER WITH LOCKWING ANGLE METER STOP AND ANGLE METER DUAL CHECK VALVE (Mueller H14042 or equal)
6. 1" CURB STOP (Comp. by F.I.P.T.)•
7. BRONZE ADAPTER (as required)
8. 1" x 24" SCHEDULE 80 PVC NIPPLE WITH END CAP
9. WHEN NEEDED, REDWOOD LUMBER SHALL BE USED TO BLOCK ANY CUT-OUT PORTIONS OF THE METER BOX WHICH ARE NOT UTILIZED (minimum of 1" thickness required)
10. PLACE 3/4" DIA. x 18" SCH. 80 PVC CENTERED IN BRACE PIPE EYE

NOTES:

FOR WATER SERVICE CONNECTION TO WATER MAIN, SEE S.D. W-1

ALL METALLIC PARTS SHALL BE ENCASED WITH 6 MIL PLASTIC SUCH THAT NO SOIL IS IN DIRECT CONTACT WITH PARTS

• Compression by female iron pipe threads

APPROVED BY:

RANCHO MURIETA
COMMUNITY SERVICES DISTRICT

1" WATER SERVICE WITH IDLER

DRAWN BY:	SCALE	DRAWING NUMBER
DATE DRAWN	N.T.S.	W-7A