

CITY OF WINNEMUCCA PUBLIC WORKS MANUAL
SECTION C: SEWER SYSTEM IMPROVEMENTS

General Notes:

1) All construction shall be in conformance with the latest edition of the “**Standard Specifications for Public Works Construction**” (commonly referred to as the “orange book”), and the “**Standard Details for Public Works Construction**” as published by Washoe County RTC ... unless specifically modified in writing by the City.

2) Listed below are some of the more common requirements/specifications used on sewer projects for easy reference by the public, developers and contractors:

Trench Excavation and Backfill:

Materials: Refer to Section 200.03 of the Standard Specifications.

Construction: Refer to Section 305 of the Standard Specs.

Maximum backfill lift shall be 12 inches.

Required compaction in streets: 95 %.

Concrete Slurry required on all collector streets (see Section 202.02).

Sewer Pipe:

Materials: Refer to Section 203 of the Standard Specs:

PVC: SDR-35 (minimum 8-inch diameter).

Construction: Refer to Section 306 of the Standard Specs:

Manholes:

Materials: Refer to Section 204 of the Standard Specs:

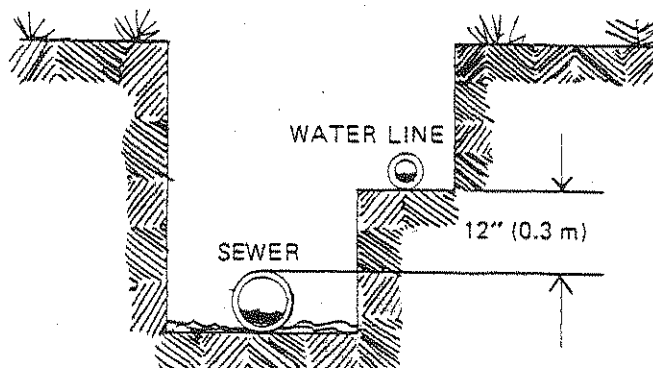
Construction: Refer to Section 204.02 of the Standard Specs:

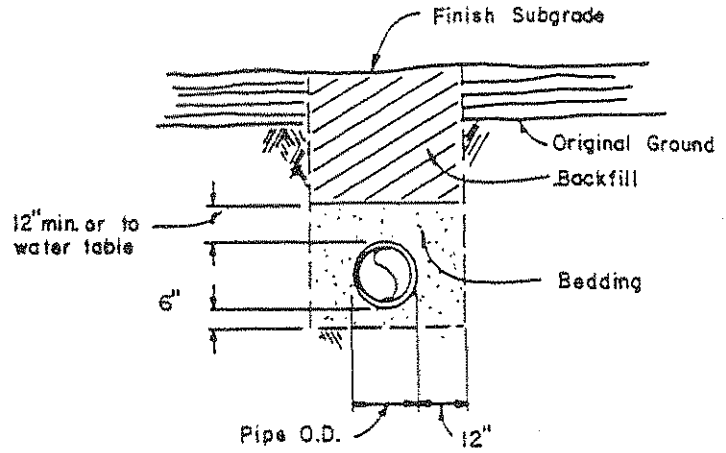
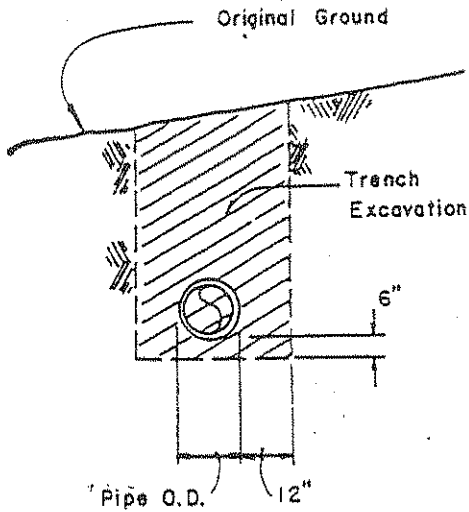
Type I only unless specifically approved by the City Engineer.

OTHER SEWER REQUIREMENTS AND NOTES

- 1) A sewer lateral (service) shall in no case serve more than one property.
- 2) A sewer lateral shall not cross through one property to serve another property without a dedicated utility easement in the name of the City of Winnemucca.
- 3) The minimum sewer lateral pipe size is four-inch diameter.
- 4) Sewer laterals are owned and maintained by each property owner to the point of connection with the City's sewer main.
- 5) The minimum sewer main pipe size is eight-inch diameter. All sewer mains must be constructed in a City street right-of-way or in a dedicated utility easement.
- 6) Manholes shall be installed on all sewer mains at a maximum spacing of three hundred feet, unless approved by the City Engineer.
- 7) A credit for sewer connection fees will be applied to new structures built on vacant lots if the property has had a structure serviced by the City sewer system within the last five years of the time the new building permit is issued. To be eligible for a credit, the Building Department must have written record of the demolition of the structure and the number of sewer connections removed when the structure was demolished or removed. The credit will be applied to the building permit issued for the new structure. Any property that has stood vacant longer than five years must pay the CURRENT demand charges for sewer connections when a building permit is obtained and will not receive credits for previous connections paid at a lesser rate unless specifically authorized by the City Council.
- 8) Water and sewer MAINS that are installed parallel to each other must be installed a minimum of ten (10) feet apart (horizontally). When a sewer and water main cross with less than 18 (eighteen) inches separation (vertically) the water main shall be encased in 2 (two) inches of concrete 10 (ten) feet on each side of the sewer main.
- 9) Water and sewer LATERALS that are installed in the same trench, and where the sewer line is not of a material approved for use inside of a building, separation shall be as follows: The bottom of the water pipe, at all points, shall be at least twelve (12) inches above the top of the sewer or drain line. Additionally, 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 twelve (12) inches from the sewer or drain line (see Page C-2 figure 1). Water pipes crossing sewer or drainage piping constructed of materials that are not approved for use with a building shall be laid a minimum of twelve (12) inches above that sewer or drain pipe.
- 10) All sewer mains shall be designed by a professional engineer licensed by the State of Nevada and approved by the City Engineer.
- 11) The transfer of sewer units from one parcel to another is prohibited unless unusual circumstances exist and the City Council approves the transfer (see Resolution 93-2).
- 12) The City Sewer Ordinance provides for cost reimbursements to developers that extend sewer mains provided that certain conditions are met (WMC 13.04.260).
- 13) All sewer main shall have sewer tape identifying line above the pipe (entire length of main).

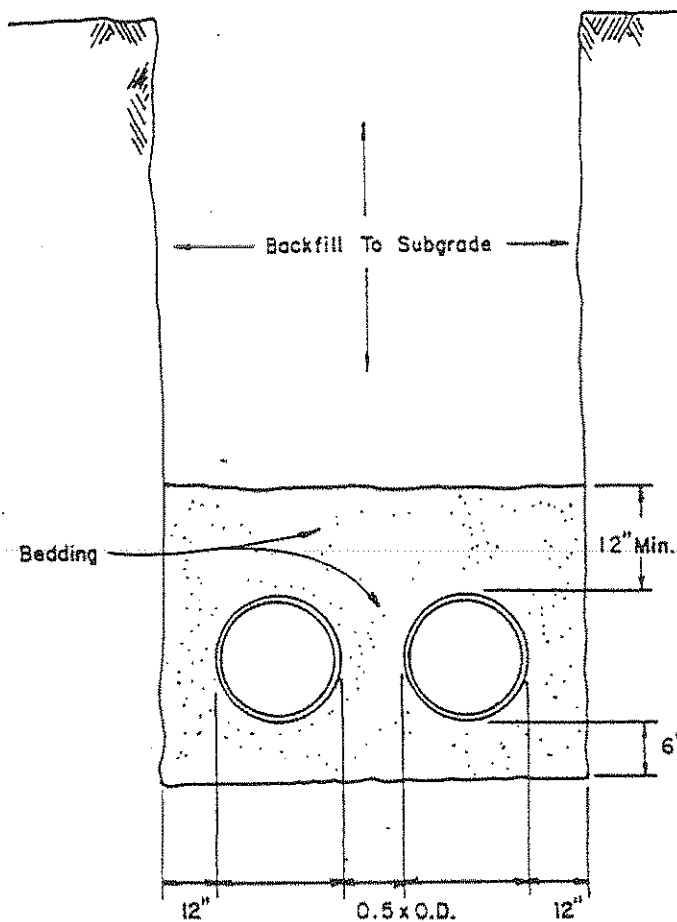
Figure 1 LATERAL ONLY (water and sewer)





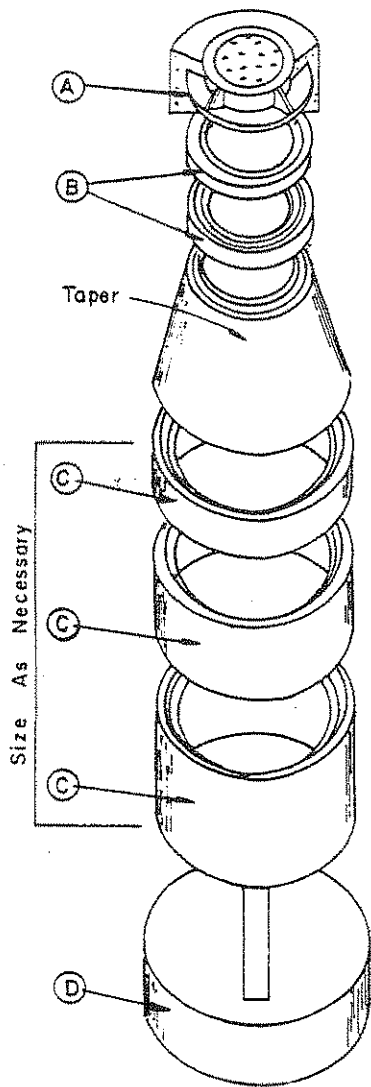
GENERAL NOTES:

- 1.) Water densified backfill and tunneling shall be by special provision only.
- 2.) Backfill shall meet the requirements for Class "E" backfill with no rocks over 4" compacted in 6" (max.) lifts to min. 90% of max. dry density.
- 3.) Bedding Material shall meet requirements for Class "A" Backfill as shown in subsection 200.03.02 of Standard Specifications or as specified by the Agency and shall be compacted to at least 95% of max. dry density.
- 4.) For trenches in roadway section, see trench patch details See Dwg. No. 1-16
- 5.) For the purpose of payment, excavation and backfill quantities are based on these standard drawings, and no additional compensation will be made. Shoring or sloped cut slopes may be necessary, but there will be no additional payment. All excavations shall conform to the latest O.S.H.A. - requirements.
- 6.) Not for use in City of Reno, Refer to Dwg. R-24.
- 7.) Place metallic location tape 1 ft. above water pipe, Carson City.

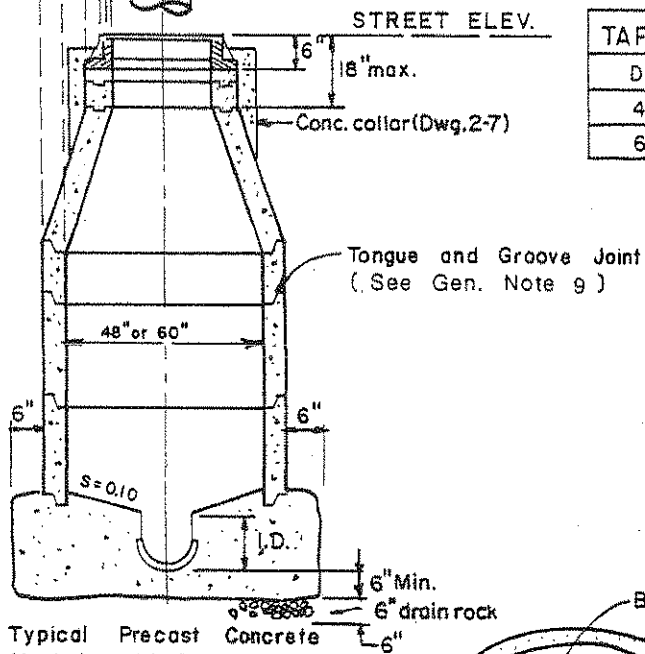
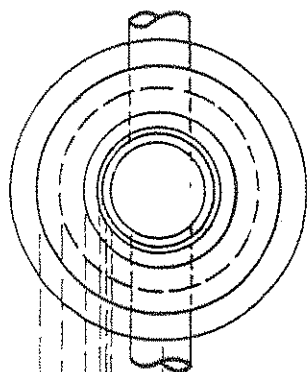


NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	Note 6	6-95	TRENCH EXCAVATION AND BACKFILL	2
				DRAWING NO. 2-1 (305)
				DATE 7-81
				PAGE 1

Precast Manhole Components shall conform to ASTM C-478



SYM.	ITEM
A	Ring & Cover
B	Grade Adjusting Ring
C	Precast manhole section
D	Base



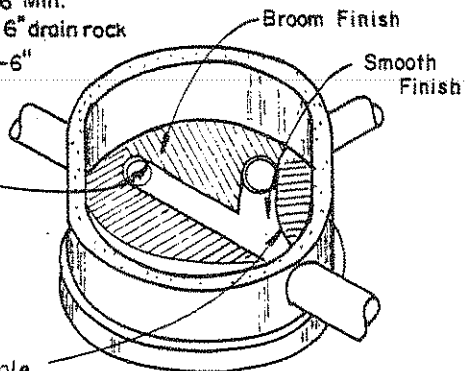
TAPER HEIGHT	
Dia.	h
48"	24" min.
60"	48" min.

EXPLODED VIEW

Typical Precast Concrete Manhole with Concentric Taper

Pipes shall not protrude more than 3" inside of Manhole Section. Construct Water tight connection to Manhole

Form smooth curve in manhole base for intersecting sewer



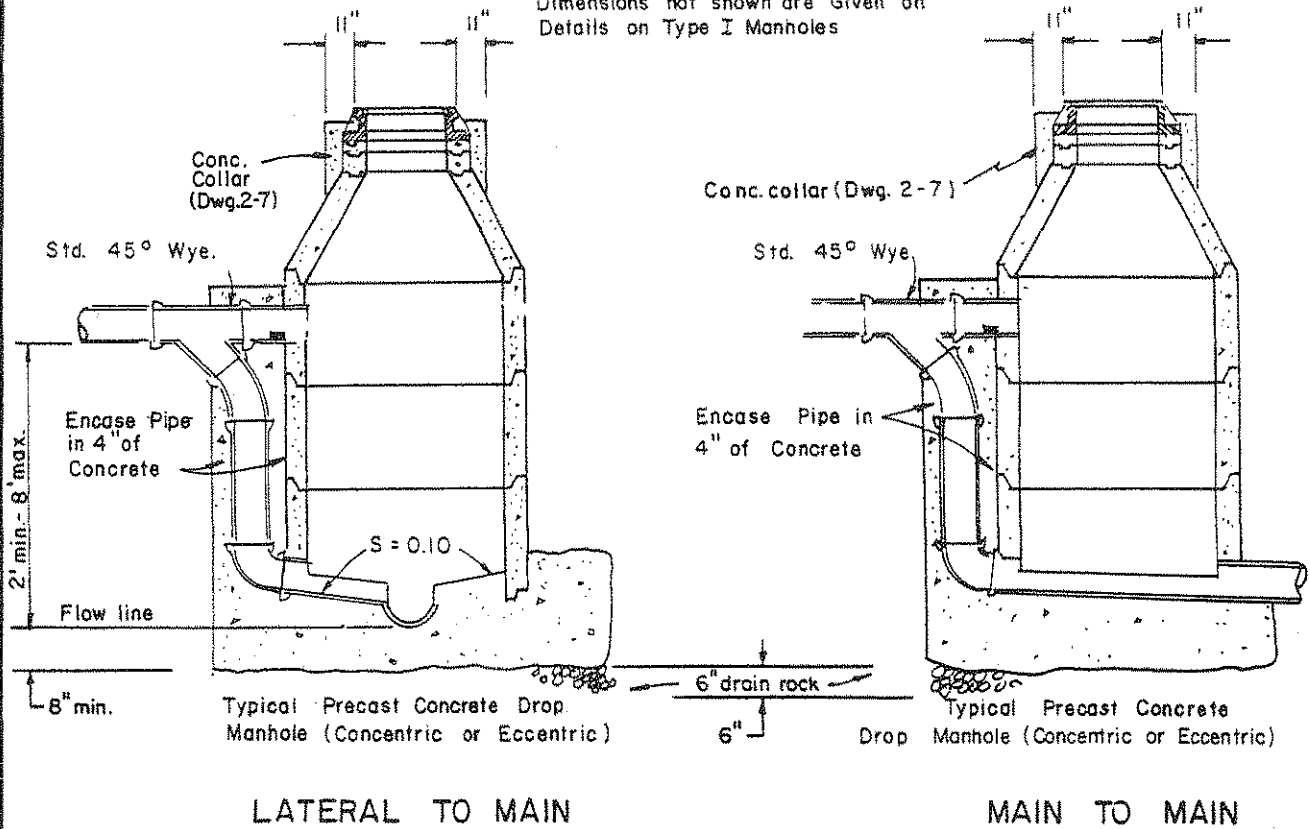
ISOMETRIC VIEW

NOTES:

- 1.) Manhole section lengths arranged to fit depth
- 2.) Precast base may be used if approved by Governing Agency

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	SEE NOTE	3-83	MANHOLE TYPE I	2
2	ITEM C, D	8-85		DRAWING NO. 2-3.1 (306)
3	Collar, dr. rock	5-95vp		DATE 7-81

NOTE:
Dimensions not shown are Given on
Details on Type I Manholes



Typical Precast Concrete Drop
Manhole (Concentric or Eccentric)

Typical Precast Concrete
Drop Manhole (Concentric or Eccentric)

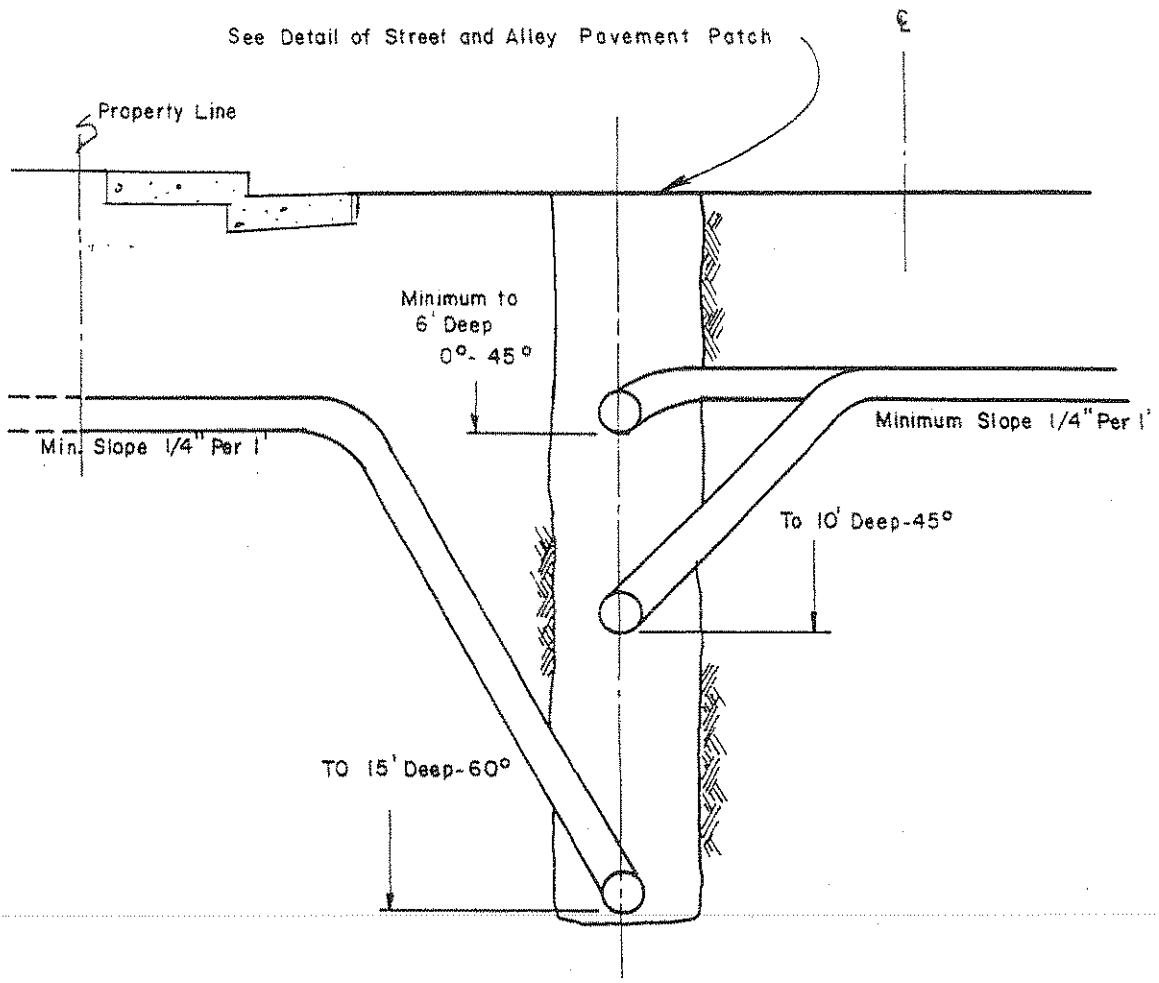
LATERAL TO MAIN

MAIN TO MAIN

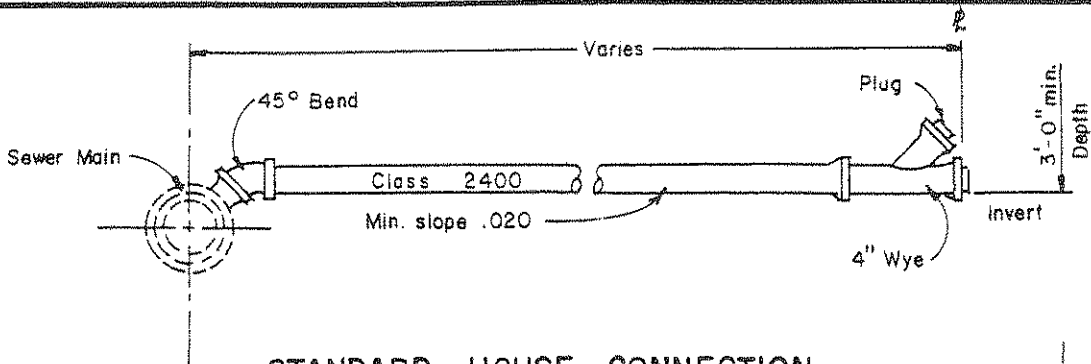
NOTES:

- 1.) Drop manholes are to be used on all Sanitary Sewers with more than 2 feet vertical drop at manhole, not to exceed 8 feet.
- 2.) Eccentric Cones may be used at the direction of the governing authority.
- 3.) Mains shall be sloped to fall at least 0.1 feet across manhole section.
- 4.) Pipe section within manhole may be P.V.C.
- 5.) Not for use in Carson City, See Agency Section.
- 6.) 8 Foot vertical drop may only be exceeded in Washoe County & the City of Reno upon approval of the Sanitary Engineers.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	ADD NOTE 6	7-83	MANHOLE TYPE III	2
2	collar, dele, dr. rk.	5-95 _{yp}		DRAWING NO. 2 - 5 (306)
				DATE 7 - 81



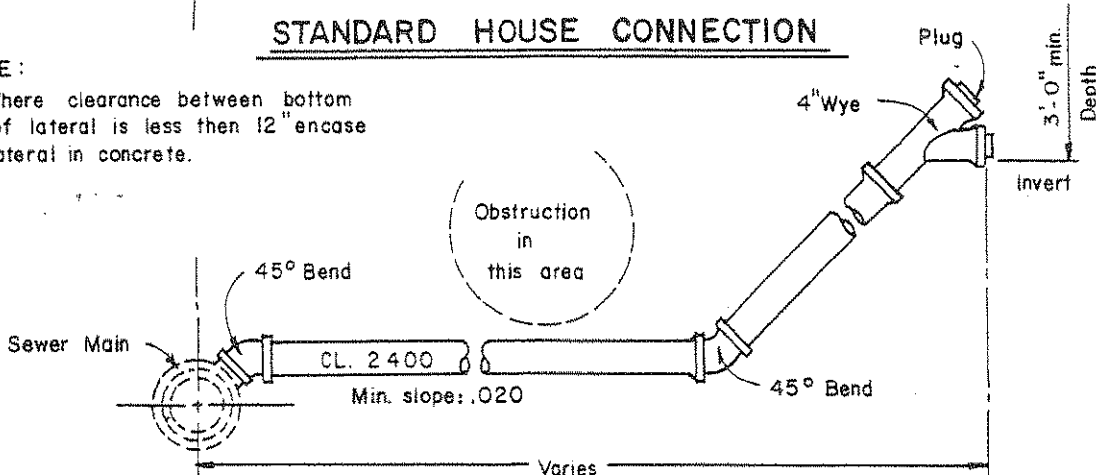
NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
			SEWER LATERAL CONNECTION	2
				DRAWING NO. 2 - 18.2 (306)
				DATE 7 - 81
				PAGE 28



STANDARD HOUSE CONNECTION

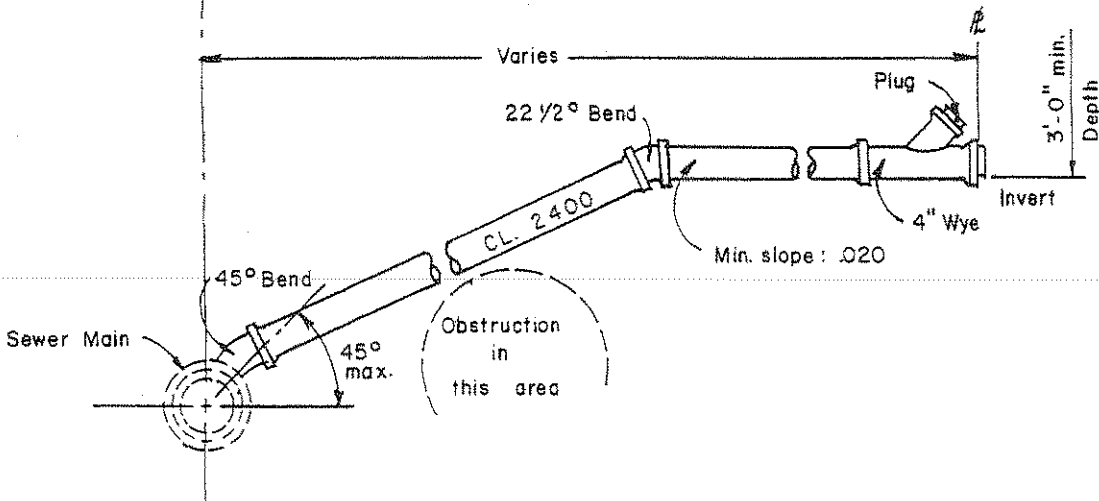
NOTE:

Where clearance between bottom of lateral is less than 12" encase lateral in concrete.



HOUSE CONNECTION UNDER OBSTRUCTION

(UPON APPROVAL ONLY)



HOUSE CONNECTION OVER OBSTRUCTION

(UPON APPROVAL ONLY)

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
			SEWER LATERAL WITH CLEANOUT WYE	2
				DRAWING NO. 2-18.3 (306)
				DATE 7-81
				PAGE 29