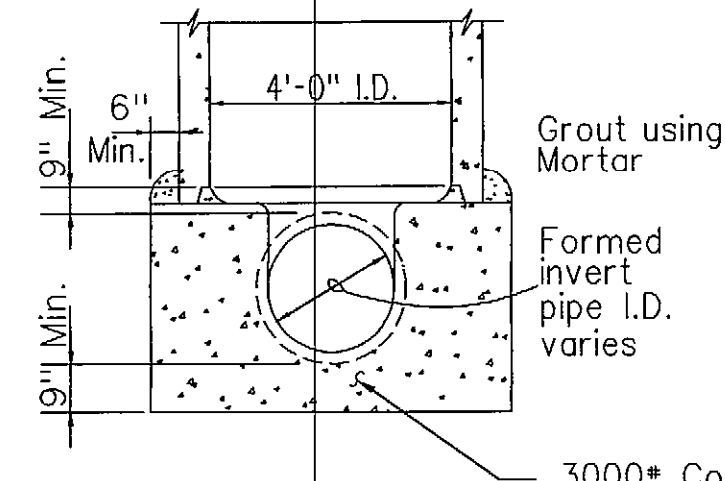
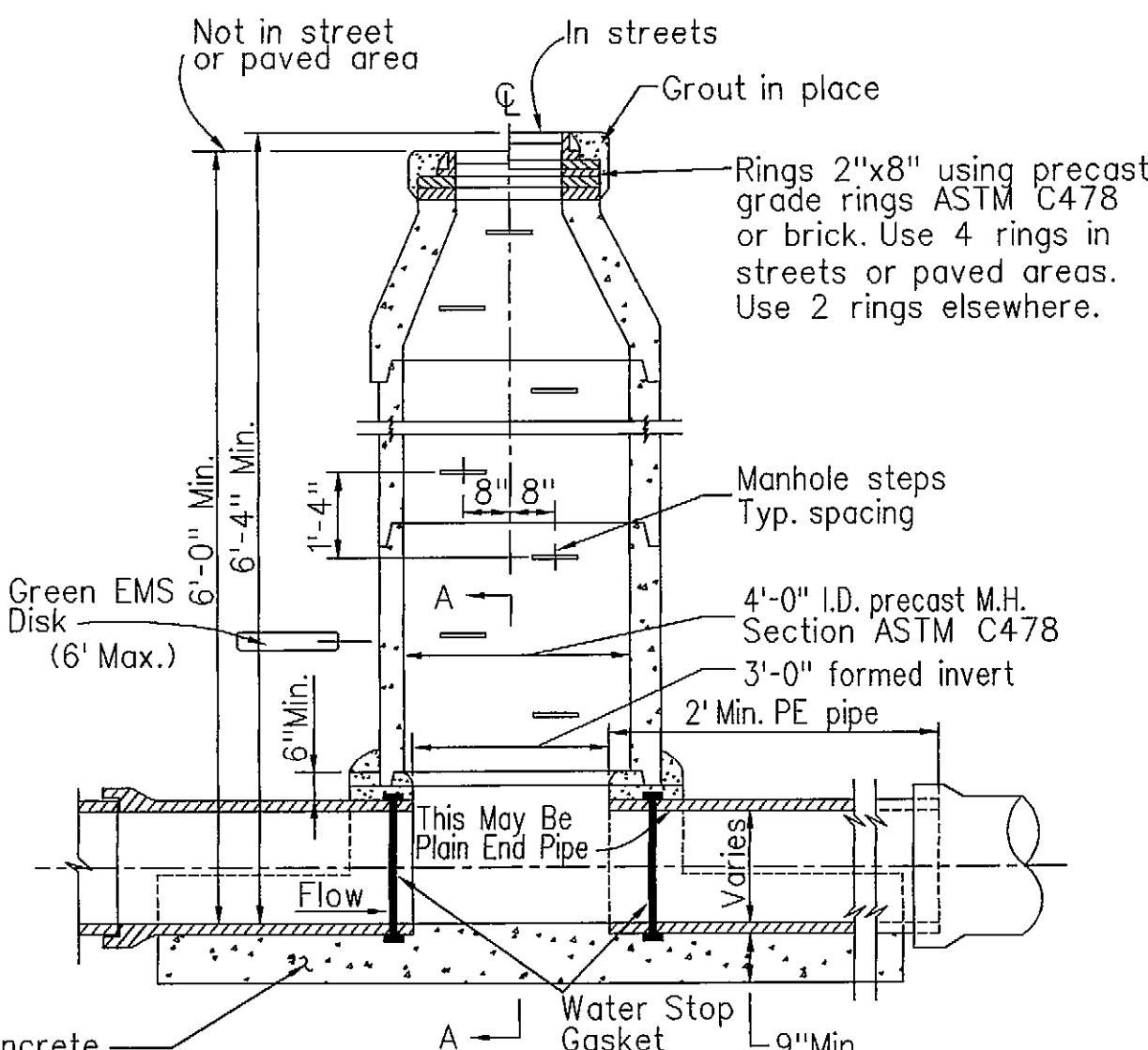


SECTION C-C

Note: Cast in place manhole shall be similar in shape and dimensions as shown. Applicable cast-in-place details shall be approved by the City. Top part of manhole may be eccentric when approved by the City. Manhole steps to be spaced vertically at 16" center/center and stagger some. Concrete above base (foundation) to be 4000 PSI class. See specifications for more details.



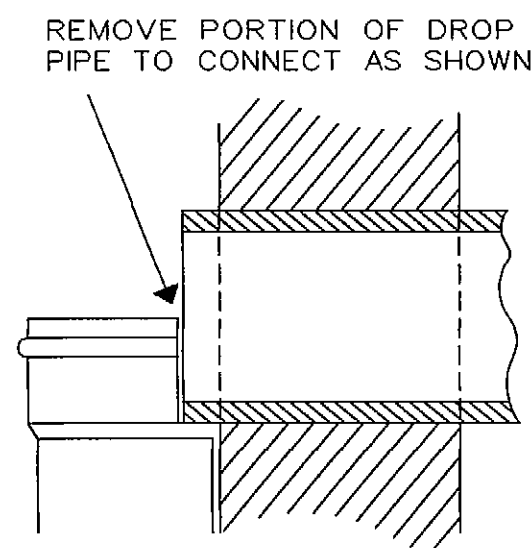
SECTION A-A



SECTION THRU PRE-CAST CONCRETE MANHOLE

TYPICAL DETAILS PRE-CAST CONCRETE MANHOLE

(Depths Not Less Than 6 Feet)
See Note For Cast-In-Place Manhole



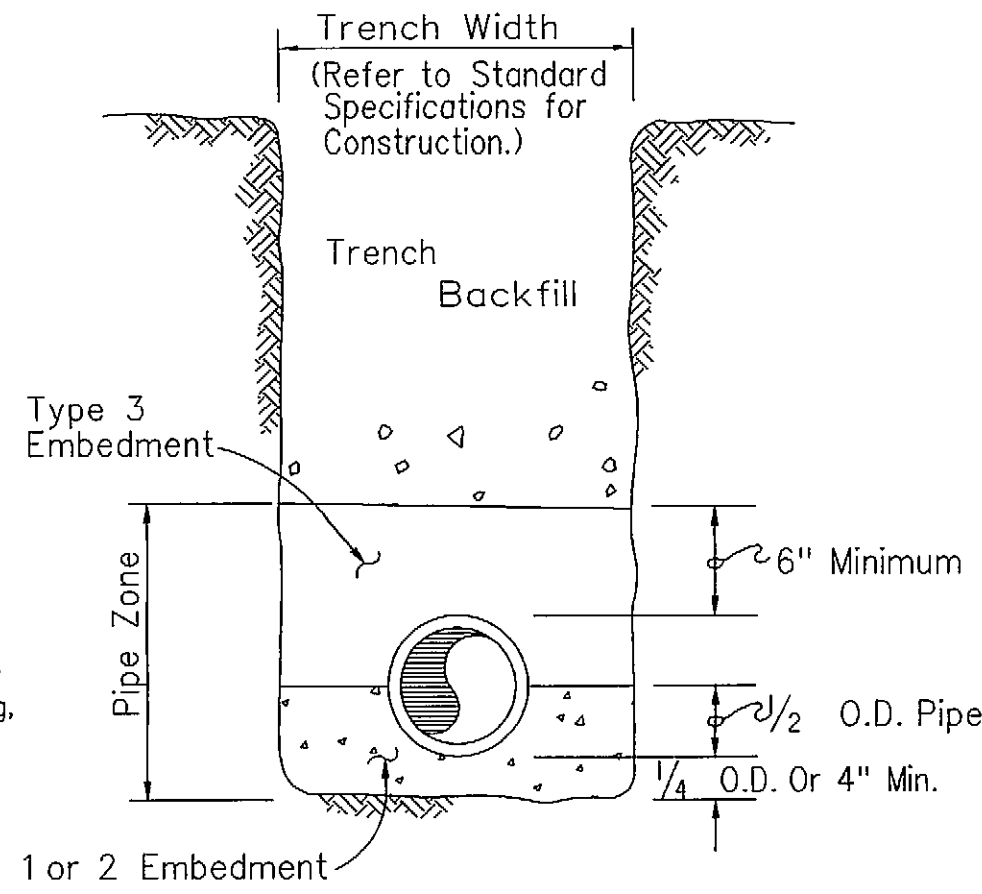
WEIR DETAIL

CRUSHED LIMESTONE, TYPE 1, EMBEDMENT: Crushed limestone shall consist of durable particles of crushed stone ranging in size from 3/4" to 1/4" with percent of wear not exceeding 35%. The gradation based on ASTM D448 size 67 use as follows:

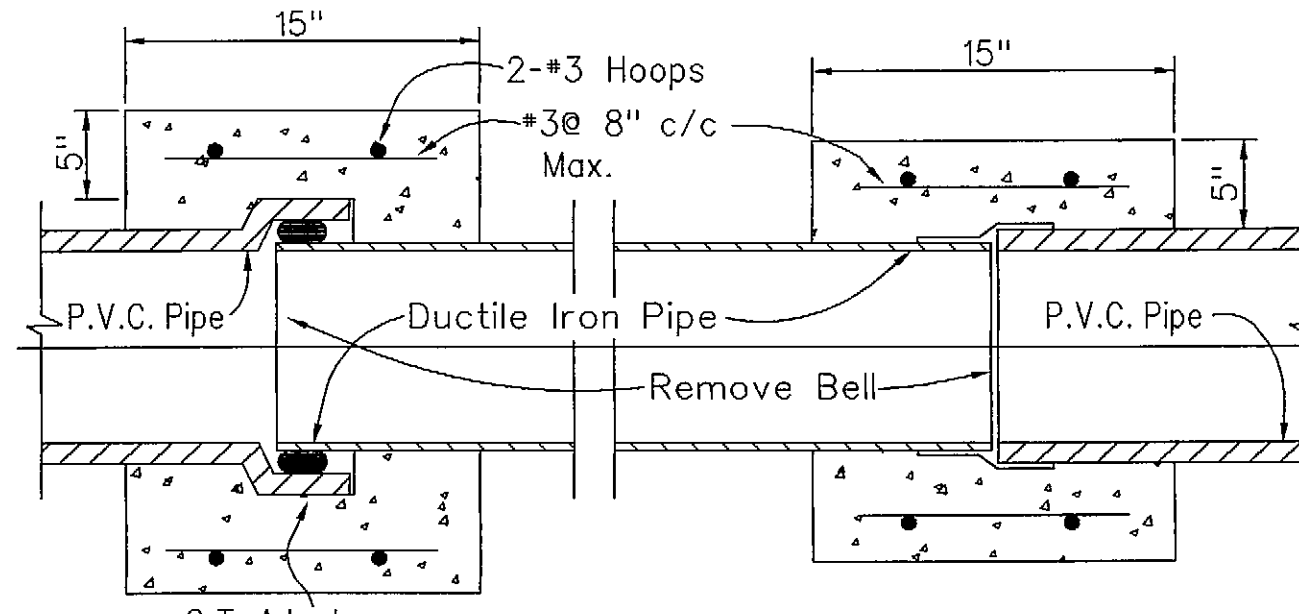
Sieve Size	% By Weight Passing
1"	100
3/4"	90 - 100
3/8"	20 - 55
No. 4	0 - 10
No. 8	0 - 5

GRAVEL, TYPE 2, EMBEDMENT: Gravel for embedment and/or encasement shall be washed gravel ranging in size from 3/4" diameter to 1/2" inch diameter meeting the requirements of ASTM designation C33, Gradation 67. The material shall be free from clay and organic material.

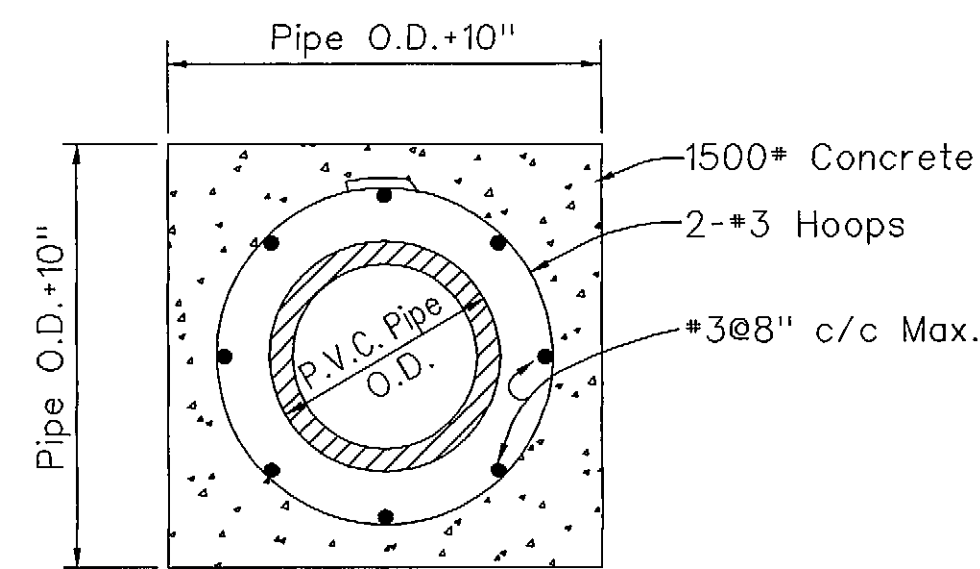
GRANULAR, TYPE 3, EMBEDMENT: Pit run granular embedment material shall be free flowing sand or mixed sand and pea gravel free from large stones, clay and organic material. The material may be an inferior grade of pit run or blow sand not normally considered satisfactory for concrete aggregate and may be used directly from pits without processing, provided it complies with the qualities described herein. The material shall be such that when wet it will not form a mud ball or tend to cling together. The material shall have 100% passing one inch (1") sieve and the plasticity index of that part passing the sieve is obtained from the City.



PIPE EMBEDMENT DETAIL

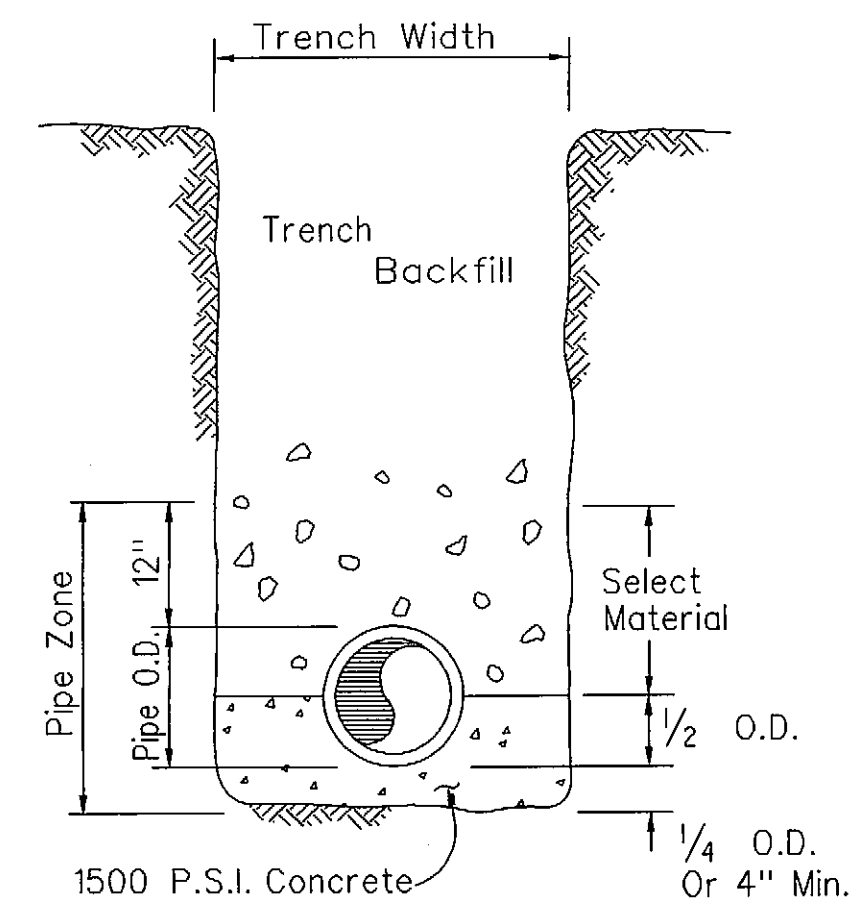


LONGITUDINAL SECTION

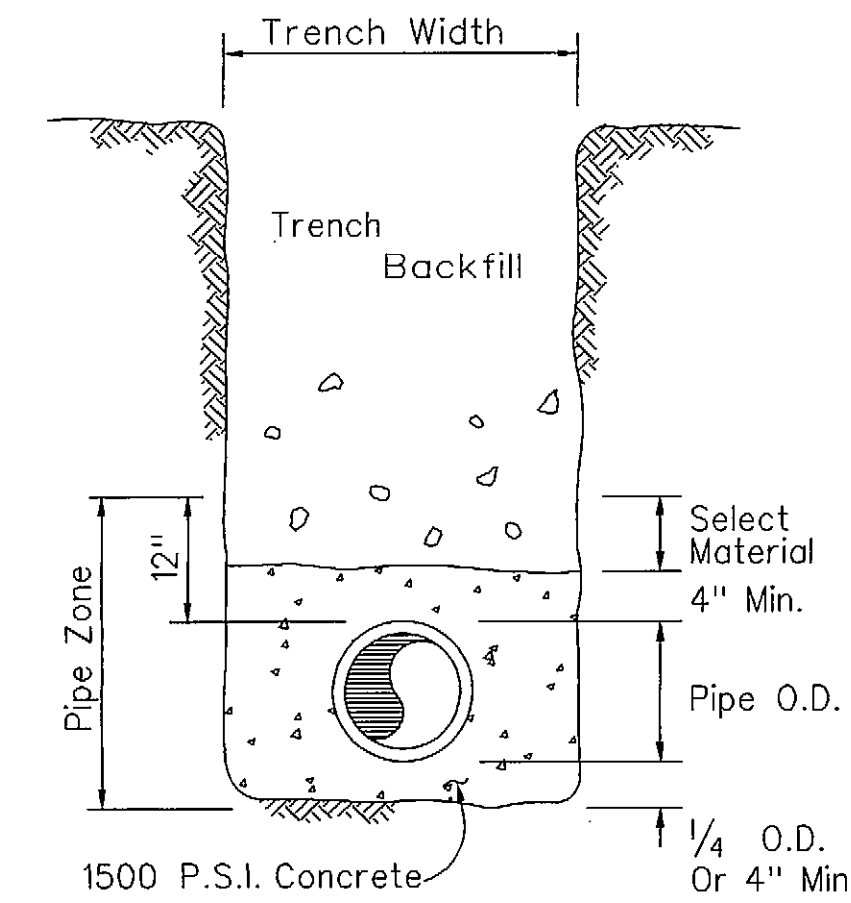


CROSS SECTION

DETAIL - CONCRETE PIPE COLLARS
Not To Scale

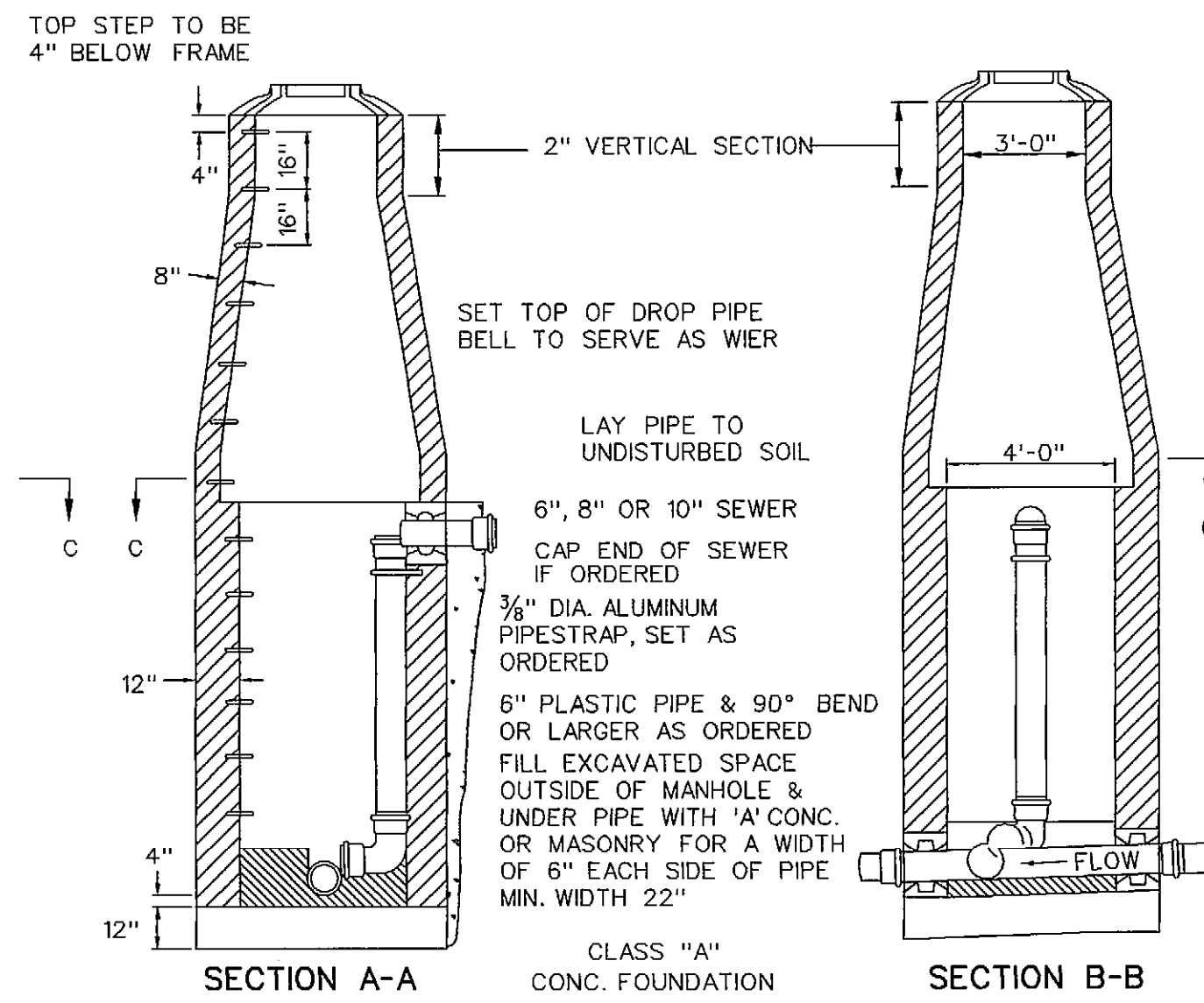


CONCRETE CRADLE



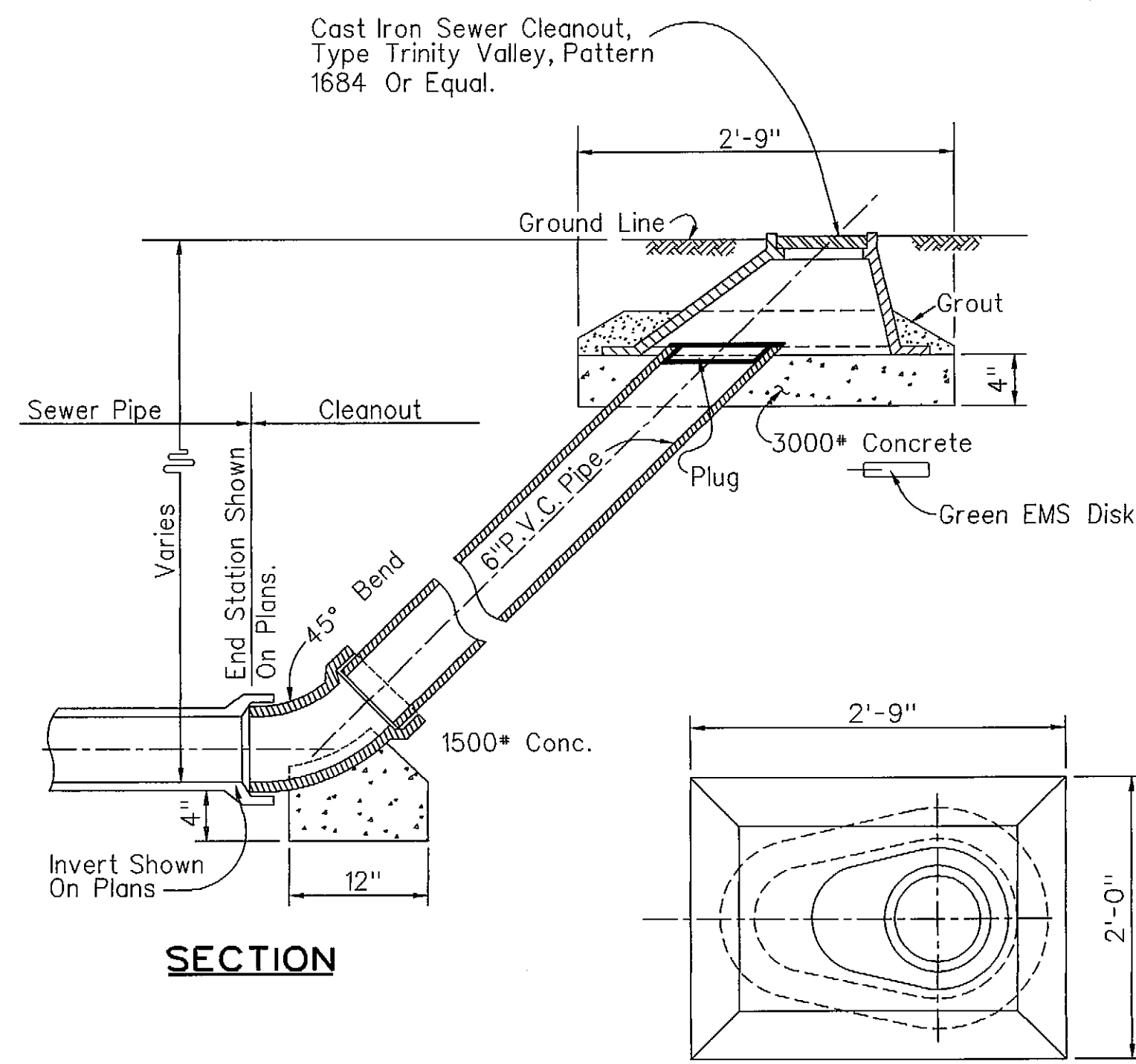
CONCRETE ENCASEMENT

CONCRETE CRADLE AND ENCASEMENT DETAILS



INSIDE DROP CONNECTION MANHOLE

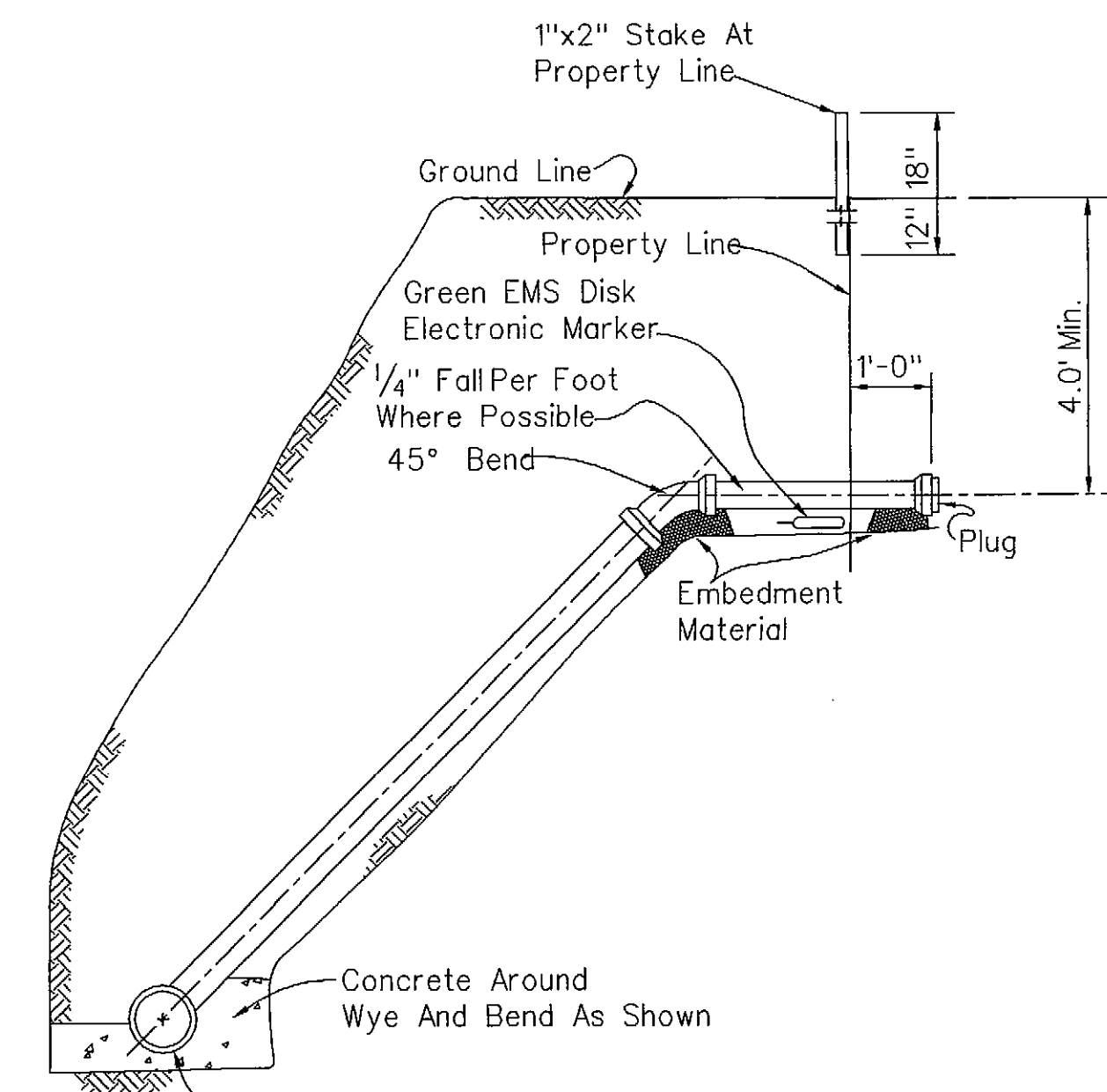
Not To Scale



SECTION

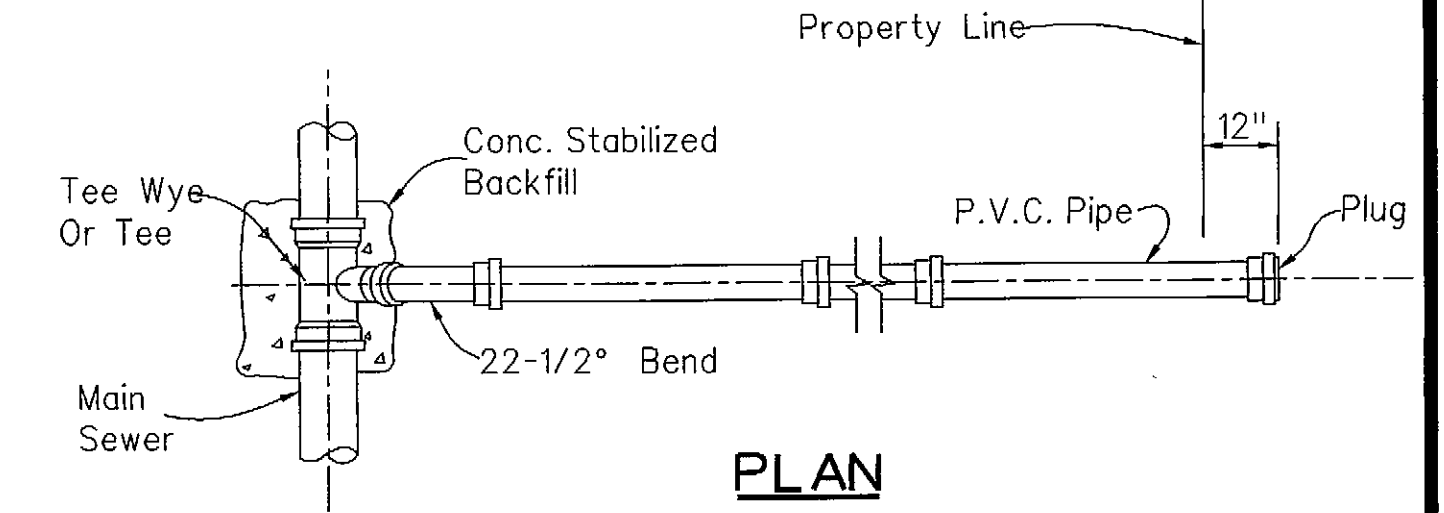
PLAN

SEWER CLEANOUT
Not To Scale

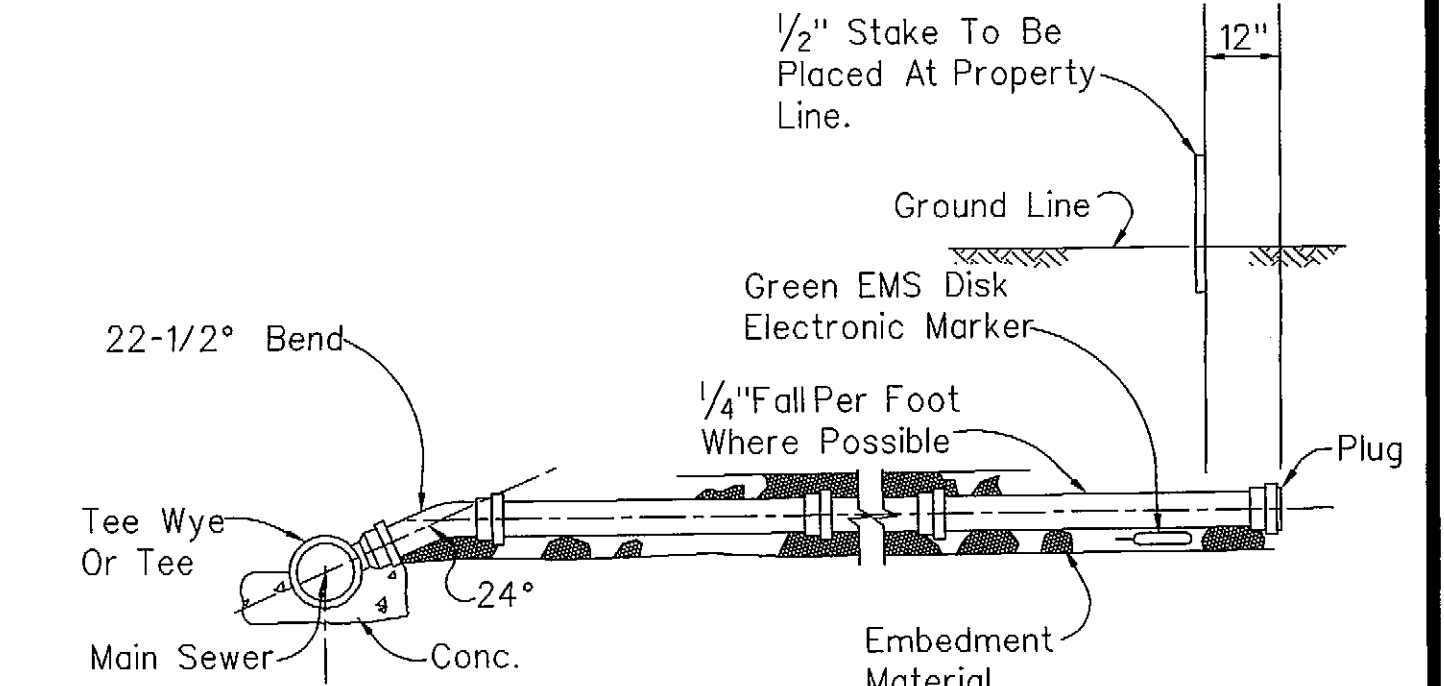


DEEP SERVICE CONNECTION

Not To Scale



PLAN

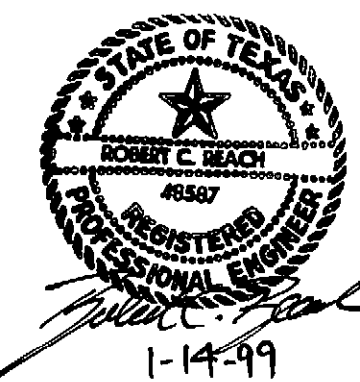


SIDE VIEW

STANDARD SERVICE CONNECTION

Not To Scale

RECORD DRAWING
VERIFIED BY *V. Braganza*
DATE 4-20-00



CITY OF ROCKWALL
"THE NEW HORIZON"

UTILITY RELOCATIONS
FOR FM 740 WIDENING

STANDARD WATER & SEWER DETAILS

Turner Collie & Braden Inc.
ENGINEERS • PLANNERS • PROJECT MANAGERS

Unit	A103	Scale	N. T. S.	Date	JANUARY 1999
Designed	TCB	Checked	V.S.	Job No.	15-97925-100
Drawn	TCB	Approved	<i>TCB</i>		SHEET 28 OF 31