

NOTES: CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, 5 SACK MIX

FRAME AND GRATE TO BE CITY OF PENDLETON STANDARD, SEE STANDARD PLAN NO. 302

DRAIN PIPE I.E. TO BE 12" UP FROM BOTTOM OF CATCHBASIN

CONCRETE STAMPING TO BE DONE AS SHOWN AS APPROVED BY CITY OF PENDLETON

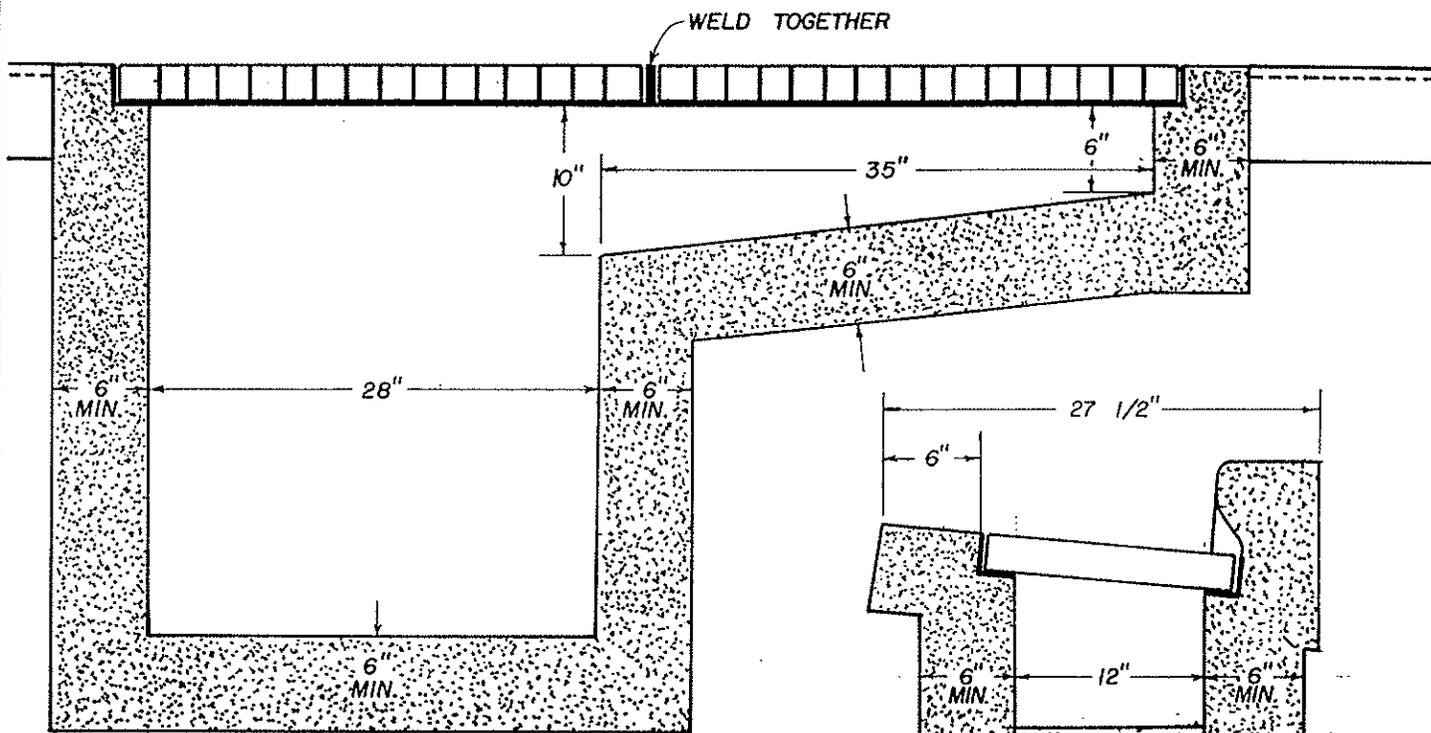
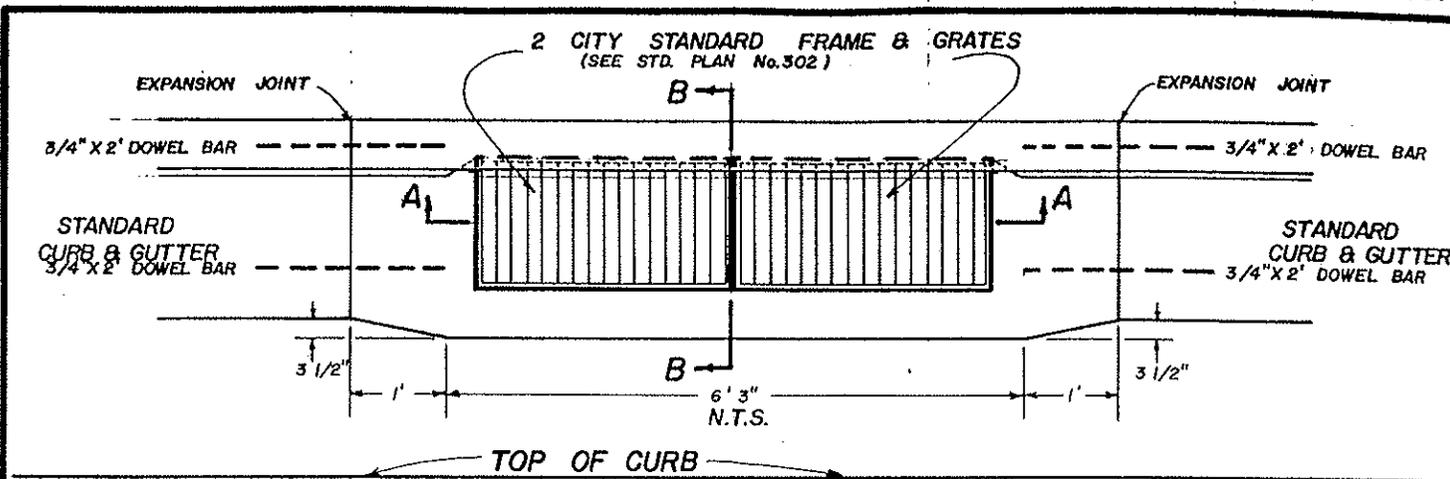
CITY OF PENDLETON

ENGINEERING DEPARTMENT

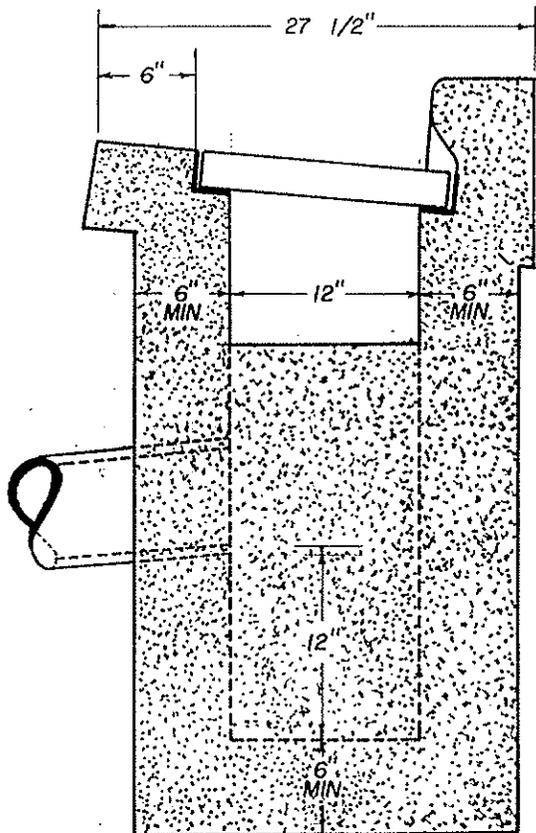
DRAWN BY: RICK B  
APPROVED: [Signature]

DATE: MARCH, 1999  
SCALE: NOT TO SCALE

TITLE: CITY STANDARD  
CATCHBASIN



SECTION A-A  
SCALE: 1" = 1'



SECTION B-B  
SCALE: 1" = 1'

**NOTE:**

CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, 5 SACK MIX

FRAME AND GRATE TO BE CITY OF PENDLETON STANDARD, SEE STANDARD PLAN No. 302

DRAIN PIPE is TO BE 12" UP FROM BOTTOM OF CATCH BASIN

WHEN STREET SLOPE IS GREATER THAN 8% OR AT ENGINEER'S DISCRETION OVER-SIZED CATCH BASIN MUST BE USED.

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DN. *RLV*  
APPV'D. *David Johnson*

DATE: 3-10-83

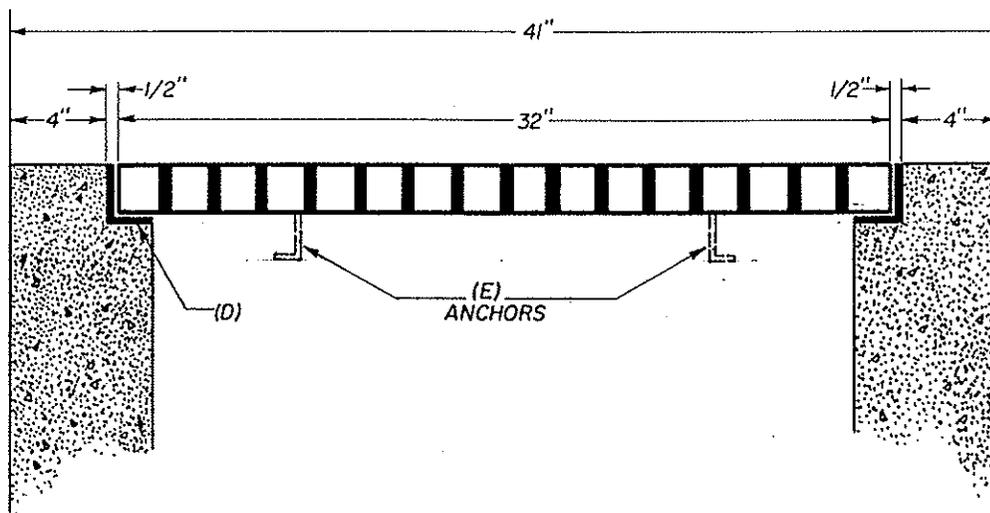
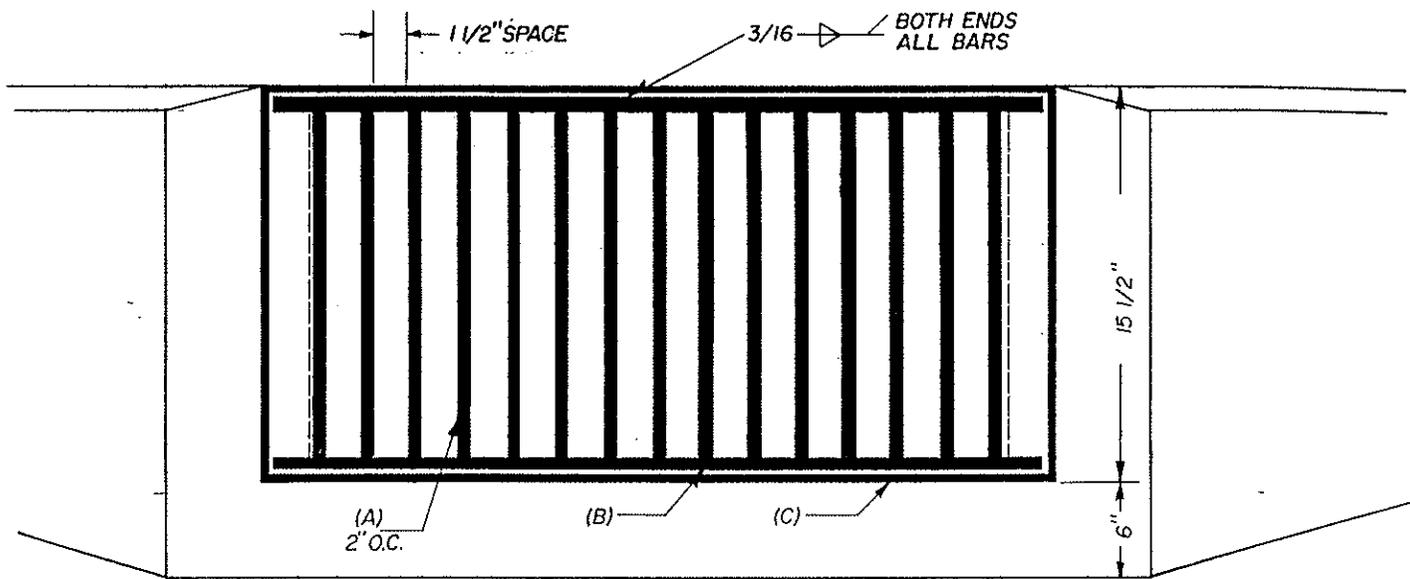
SCALE: AS SHOWN

TITLE: OVERSIZE CATCH BASIN

**DIMENSIONS:**

**GRATE: 2" x 1/2" STEEL BAR**  
 (A) 15 BARS, 14 1/2" LONG  
 (B) 2 BARS, 32" LONG

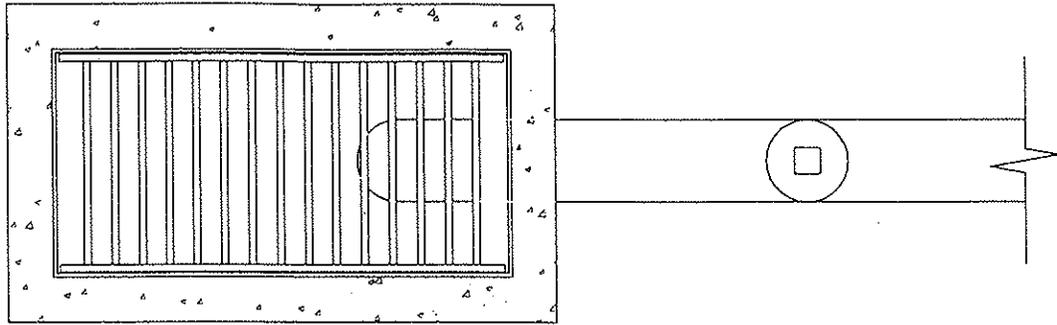
**FRAME: 2" x 2 1/2" x 1/4" ANGLE IRON**  
 (C) 2 - 33" LONG  
 (D) 2 - 16 1/4" LONG  
 (E) 4 - 2" LONG



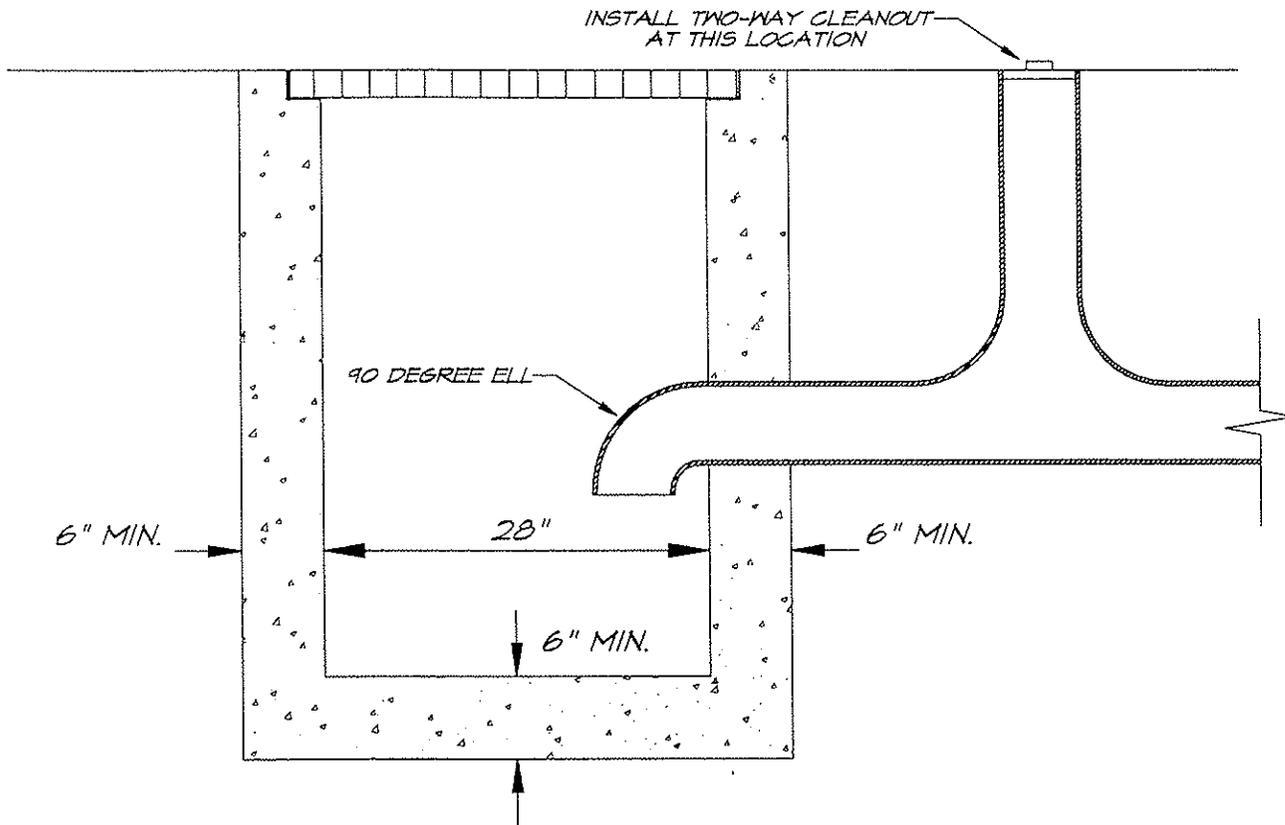
**NOTE:**

CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, 5 SACK MIX  
 30" x 1/4" x 1" STEEL STRAP FOR BICYCLE PROTECTION MAY BE REQUIRED BY  
 CITY ENGINEER

CITY OF PENDLETON	ENGINEERING DEPARTMENT
DN. C.D. <i>David C. King</i> DATE: 4-4-83 APPV'D. <i>David C. King</i> SCALE: 1 1/2" = 1' CITY ENGINEER	TITLE: STANDARD CATCH BASIN FRAME AND GRATE



TOP VIEW



SECTION A-A

NOTES: CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, 5 SACK MIX

FRAME AND GRATE TO BE CITY OF PENDLETON STANDARD, SEE STANDARD PLAN NO. 302

DRAIN PIPE I.E. TO BE 12" UP FROM BOTTOM OF CATCHBASIN

REVISED 3/2001

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: *RICK B.*

DATE: MARCH, 1999

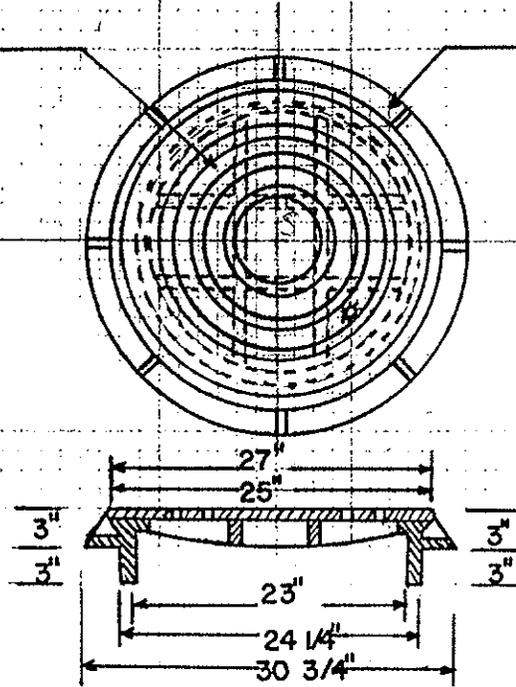
APPROVED: *[Signature]*

SCALE: NOT TO SCALE

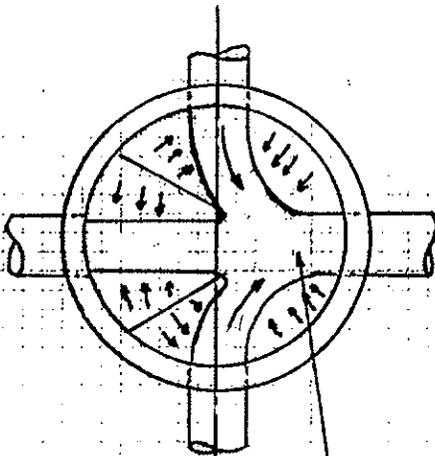
TITLE: STANDARD CATCHBASIN FOR PRIVATE PARKING LOTS

MIN. COVER  
WT. = 120#

MIN. FRAME WT. = 155#



STANDARD MANHOLE  
RING AND COVER  
3/4" = 1'



INVERT CHANNEL CONSTRUCTED TO  
UNIFORM FLOW LINES WITH GRADUAL  
TRANSITION SECTIONS

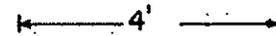
GENERAL PLAN OF CHANNEL  
INTERSECTION  
3/8" = 1'

PRECAST 4"  
CONCRETE RING

GROUT

PRECAST  
CONE

PRECAST  
CONCRETE  
MANHOLE



PRECAST RING EXTENSION  
FOR TYPICAL MANHOLE  
3/8" = 1'

CITY OF PENDLETON

ENGINEERING DEPARTMENT

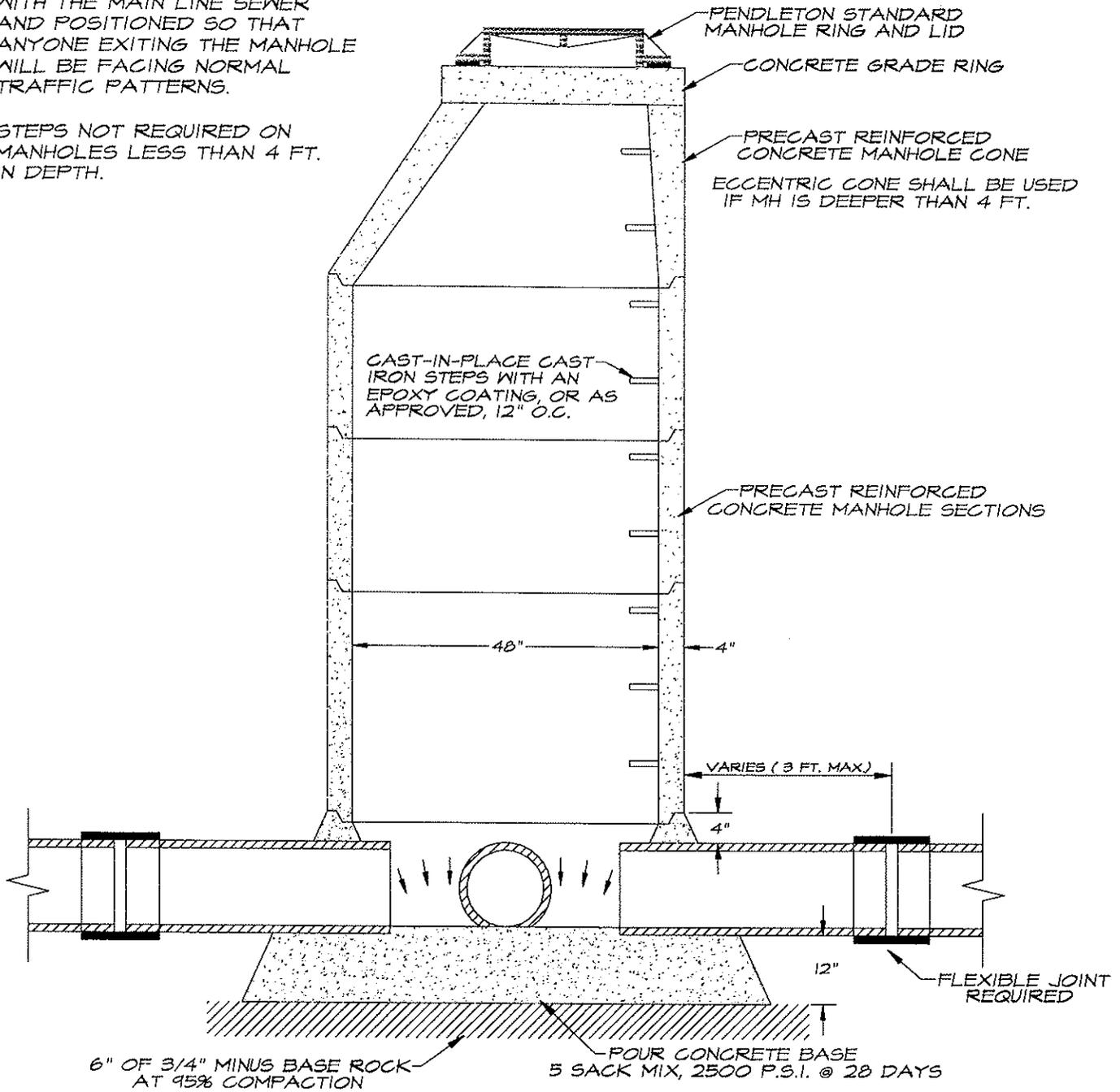
DN: M.P.M. DATE: 8/24/73  
APPVD: *David H. ...* SCALE: AS SHOWN  
CITY ENGINEER

TITLE: STANDARD MANHOLE RING & COVER

NOTE:  
 1. ALL JOINTS TO BE MORTARED  
 MORTAR SHALL CONSIST OF  
 1 PART CEMENT AND  
 1 PART MORTAR SAND

2. ECCENTRIC CONE MUST BE ALIGNED  
 WITH THE MAIN LINE SEWER  
 AND POSITIONED SO THAT  
 ANYONE EXITING THE MANHOLE  
 WILL BE FACING NORMAL  
 TRAFFIC PATTERNS.

3. STEPS NOT REQUIRED ON  
 MANHOLES LESS THAN 4 FT.  
 IN DEPTH.



REVISED NOVEMBER 2000

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK B. [Signature]

DATE: JUNE, 2000

APPROVED: [Signature]

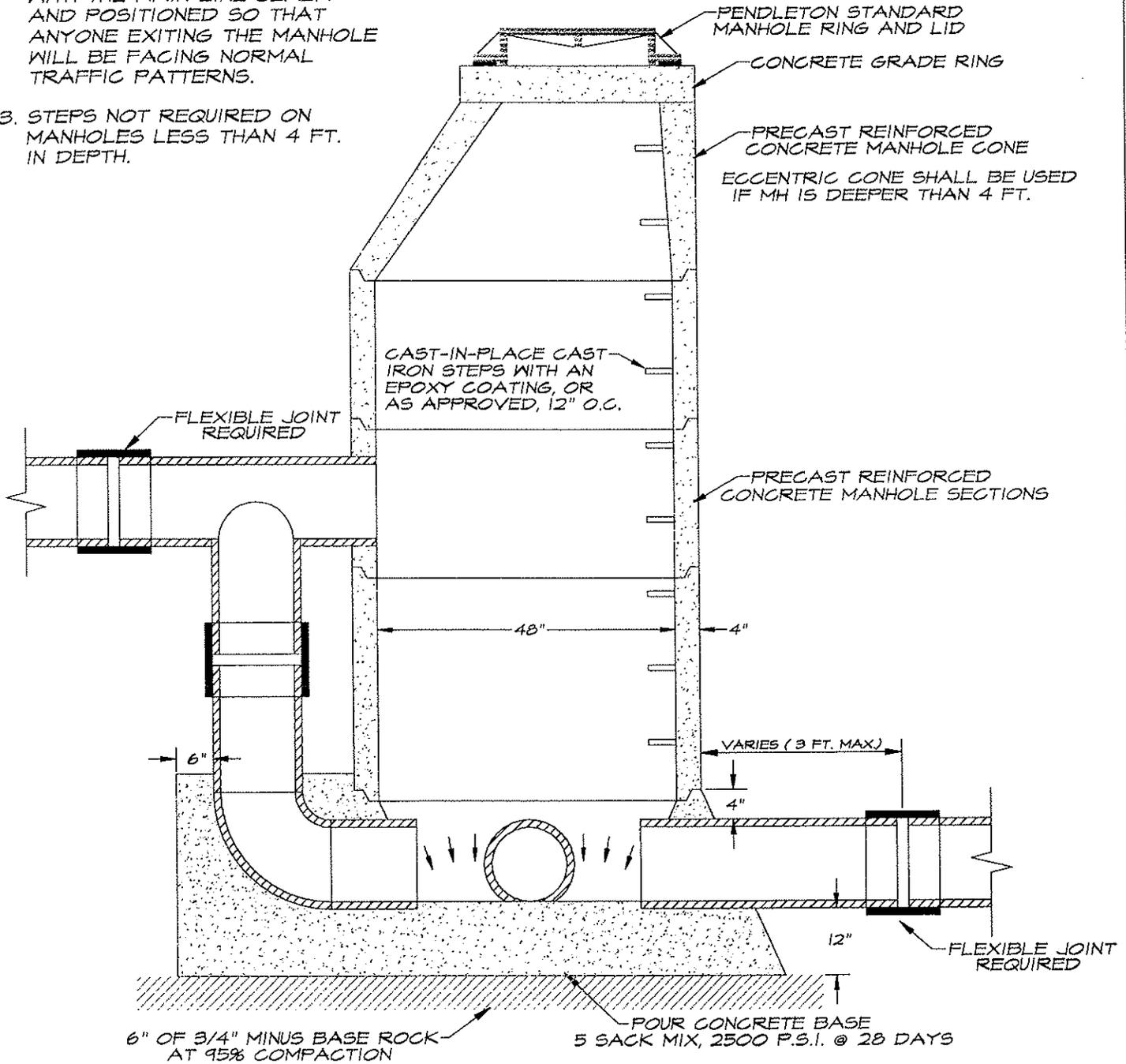
SCALE: NOT TO SCALE

TITLE: STANDARD MANHOLE

NOTE:  
 1. ALL JOINTS TO BE MORTARED  
 MORTAR SHALL CONSIST OF  
 1 PART CEMENT AND  
 1 PART MORTAR SAND

2. ECCENTRIC CONE MUST BE ALIGNED  
 WITH THE MAIN LINE SEWER  
 AND POSITIONED SO THAT  
 ANYONE EXITING THE MANHOLE  
 WILL BE FACING NORMAL  
 TRAFFIC PATTERNS.

3. STEPS NOT REQUIRED ON  
 MANHOLES LESS THAN 4 FT.  
 IN DEPTH.



REVISED AUGUST 2000

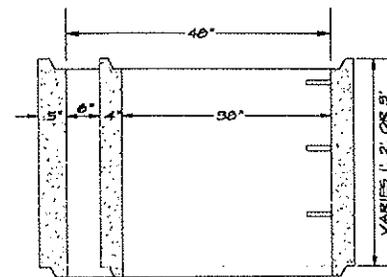
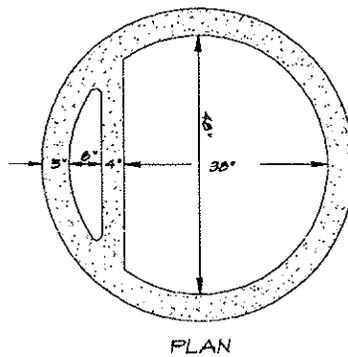
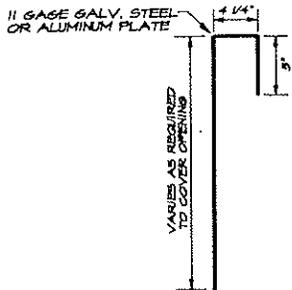
CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK B.  
 APPROVED: [Signature]

DATE: NOV. , 2000  
 SCALE: NOT TO SCALE

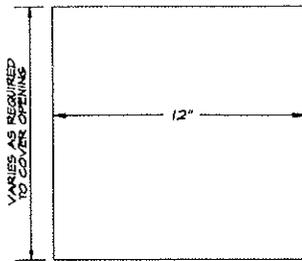
TITLE: STANDARD DROP  
 MANHOLE



PLAN

SECTION B-B

OREGON DROP 48" PRECAST CONCRETE SECTION DETAIL



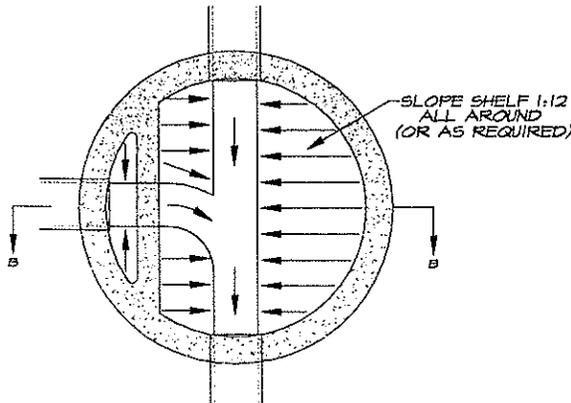
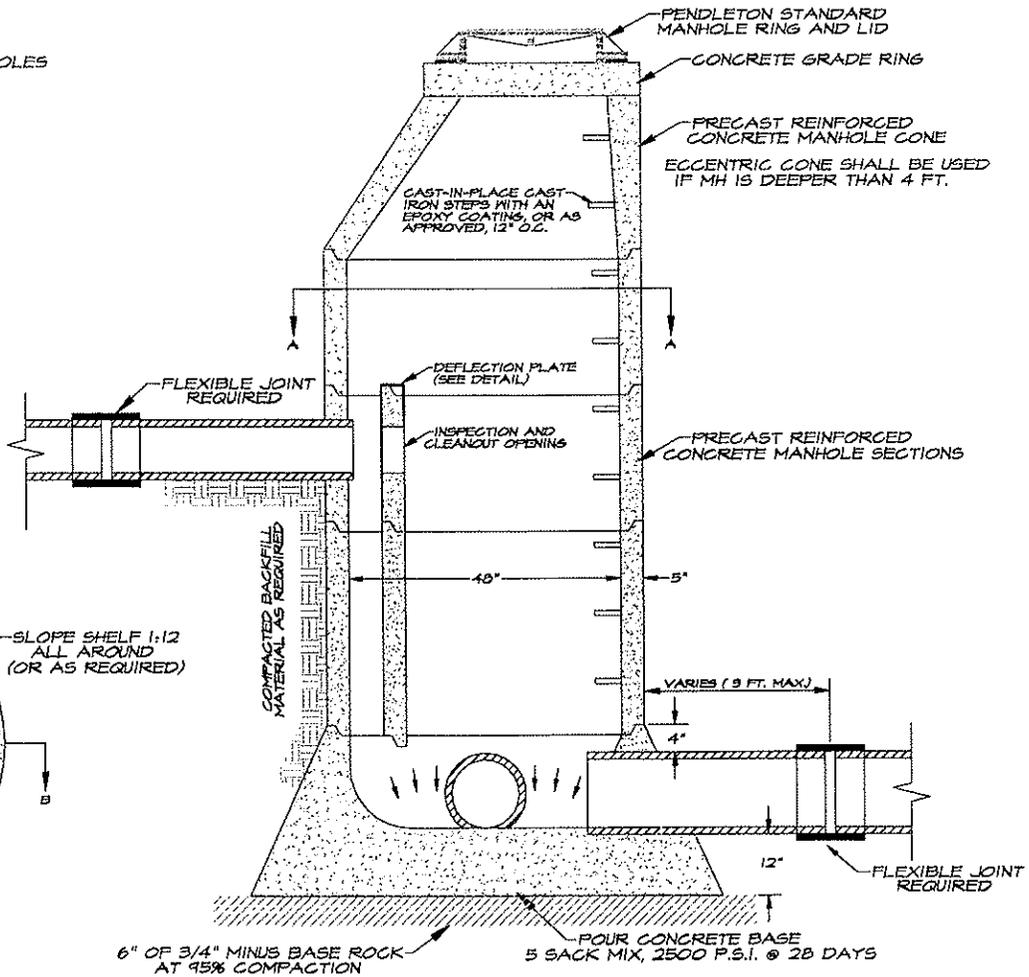
DEFLECTION PLATE DETAIL

GENERAL NOTES:

THE USE OF OREGON DROP SECTIONS IN MANHOLE CONSTRUCTION ELIMINATES THE NEED FOR OUTSIDE DROPS AT MANHOLES WHERE IT IS DESIRABLE OR NECESSARY TO PROVIDE A GRADE DIFFERENTIAL BETWEEN THE INVERT OF THE MANHOLE AND AN INCOMING LINE.

CONSTRUCTION NOTES:

1. OREGON DROP PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM SPECIFICATIONS C-478.
2. ALL JOINTS TO BE MORTARED. MORTAR SHALL CONSIST OF ONE (1) PART CEMENT AND ONE (1) PART MORTAR SAND.
3. IT IS RECOMMENDED THAT THE FIRST OREGON DROP SECTION SET IN THE BASE BE A 12" SECTION FOR EASE IN SHAPING THE CHANNEL IN THE DROP PORTION.
4. ECCENTRIC CONE MUST BE ALIGNED WITH THE MAIN LINE SEWER AND SO POSITIONED THAT ANYONE EXITING THE MANHOLE WILL BE FACING NORMAL TRAFFIC PATTERNS.



SECTION A-A

REVISED AUGUST 2000

CITY OF PENDLETON

ENGINEERING DEPARTMENT

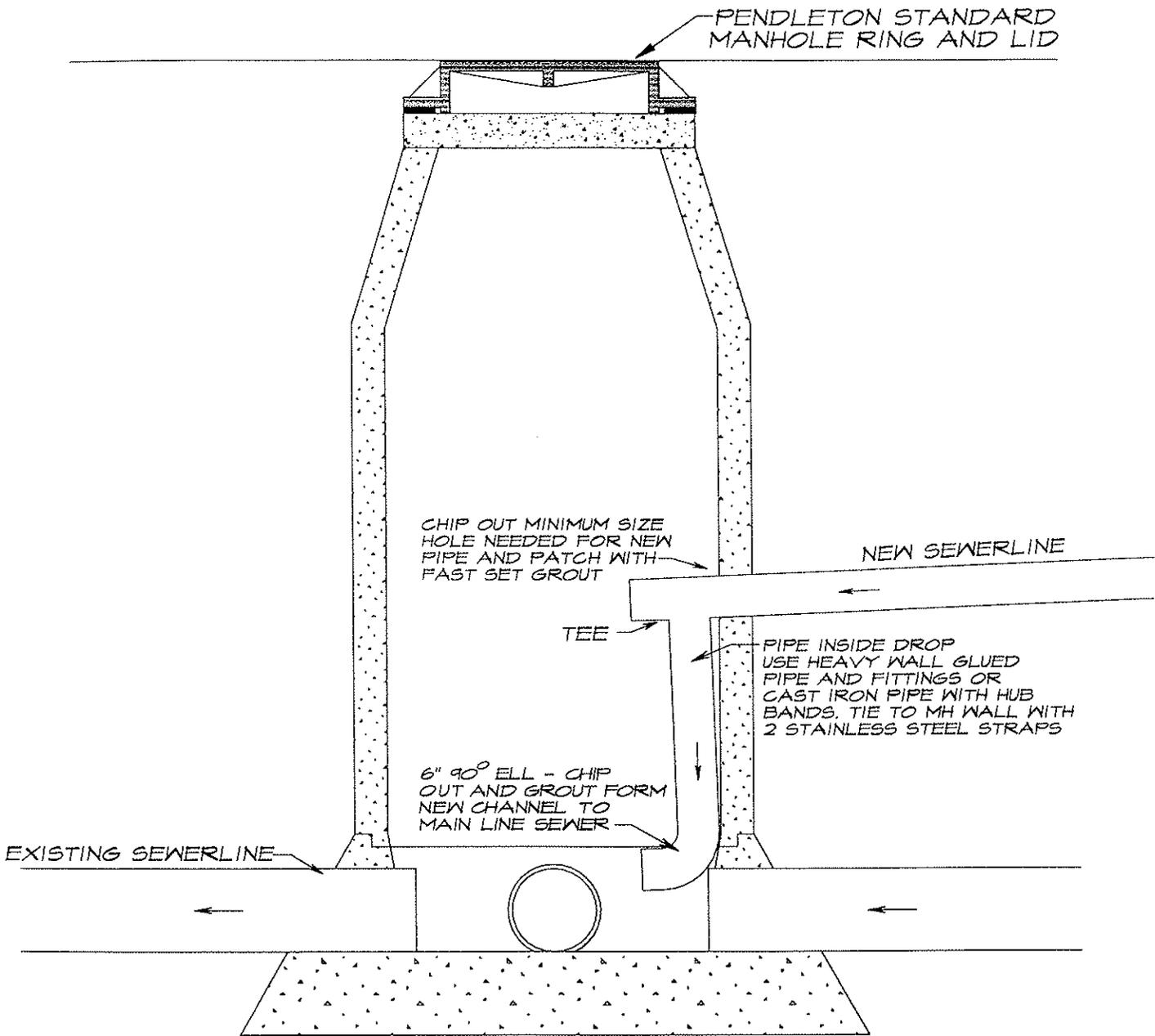
DRAWN BY: RICK B.

DATE: NOV. , 2000

TITLE: PRECAST DROP MANHOLE

APPROVED: [Signature]

SCALE: NOT TO SCALE



DROP MANHOLE DETAIL

CITY OF PENDLETON

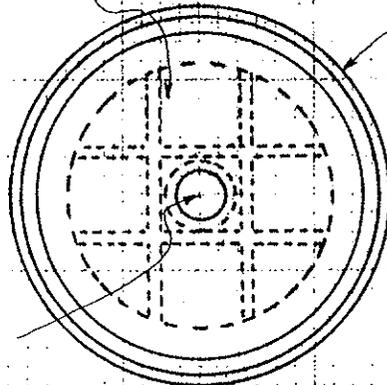
ENGINEERING DEPARTMENT

DRAWN BY: RICK B. DATE: DECEMBER, 1995  
 APPROVED: *[Signature]* SCALE: NOT TO SCALE

TITLE: SEWER DROP WITHIN EXISTING MANHOLE DETAIL

MIN. COVER  
WT. = 140\*

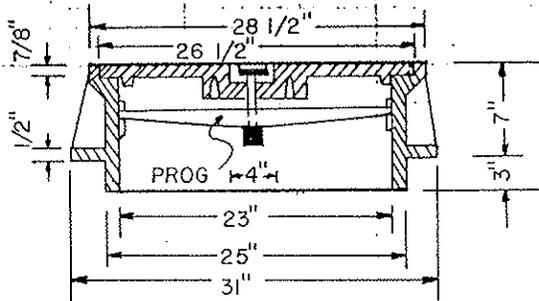
MIN. FRAME  
WT. = 230\*



3/4"  $\phi$  BRONZE  
BOLT w/ BRASS &  
RUBBER WASHERS

NOTE:

RUBBER GASKET - 3/4" x 1/2"  
GROOVE - 1/4" DEEP w/ 60°  
SIDE SLOPES



**WATERTIGHT MANHOLE RING & COVER**

3/4" = 1'-0"

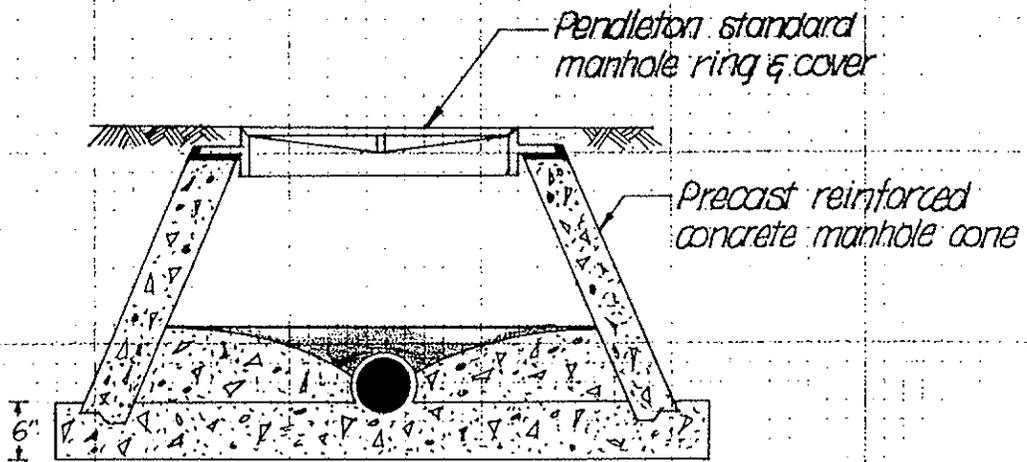
CITY OF PENDLETON

ENGINEERING DEPARTMENT

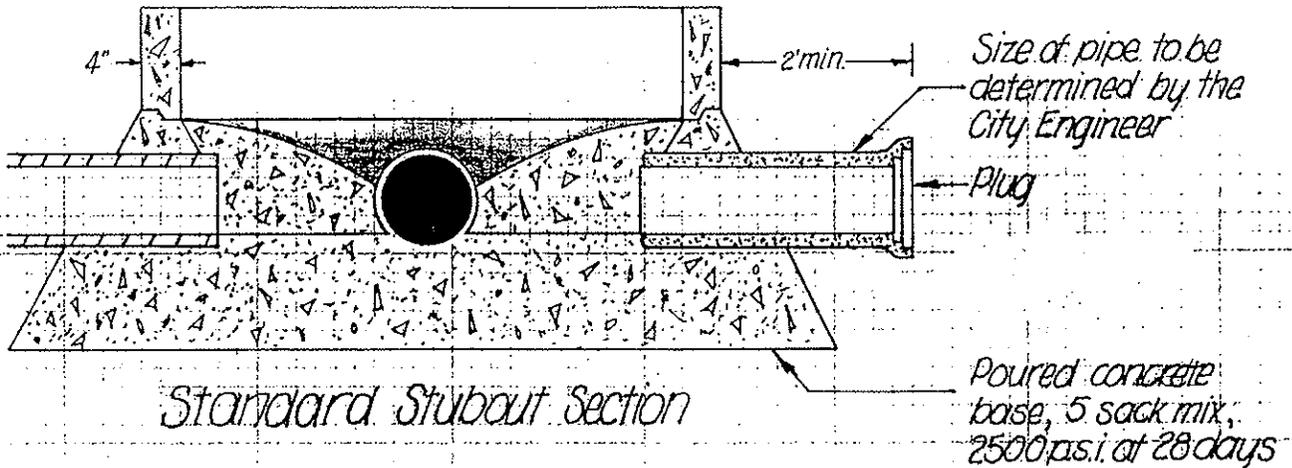
DN: *M. B. ...*  
APPV'D: *[Signature]*  
CITY ENGINEER

DATE: 3/19/74  
SCALE: AS SHOWN

TITLE: WATERTIGHT MANHOLE & COVER

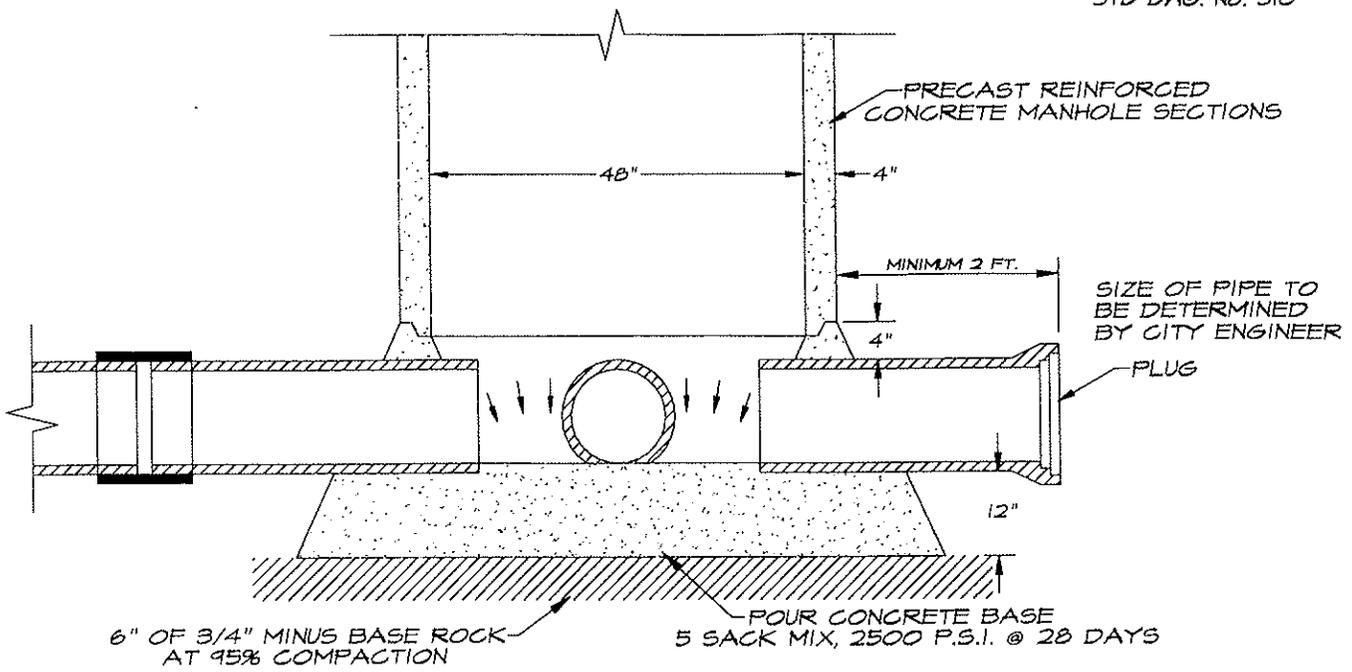


Shallow Manhole Section

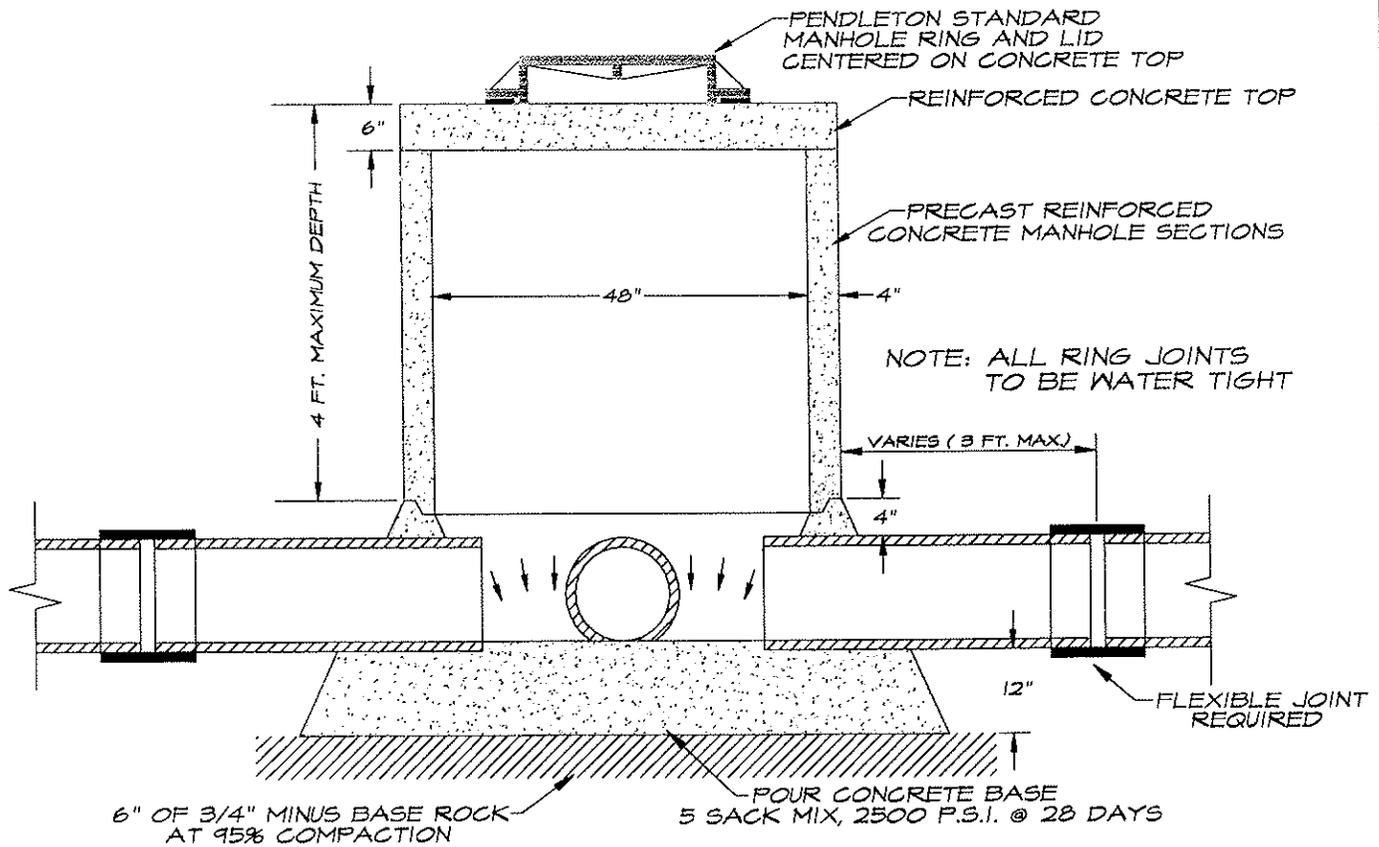


Standard Stubout Section

CITY OF PENDLETON		ENGINEERING DEPARTMENT	
DN: P.L.P.	DATE: 7/12/74	TITLE: TYPE I SHALLOW MANHOLE SECTION	
APP'D: <i>David L. Young</i>	SCALE: NONE		
CITY ENGINEER			



STANDARD STUBOUT



SHALLOW MANHOLE SECTION

REVISED NOVEMBER 2000

CITY OF PENDLETON

ENGINEERING DEPARTMENT

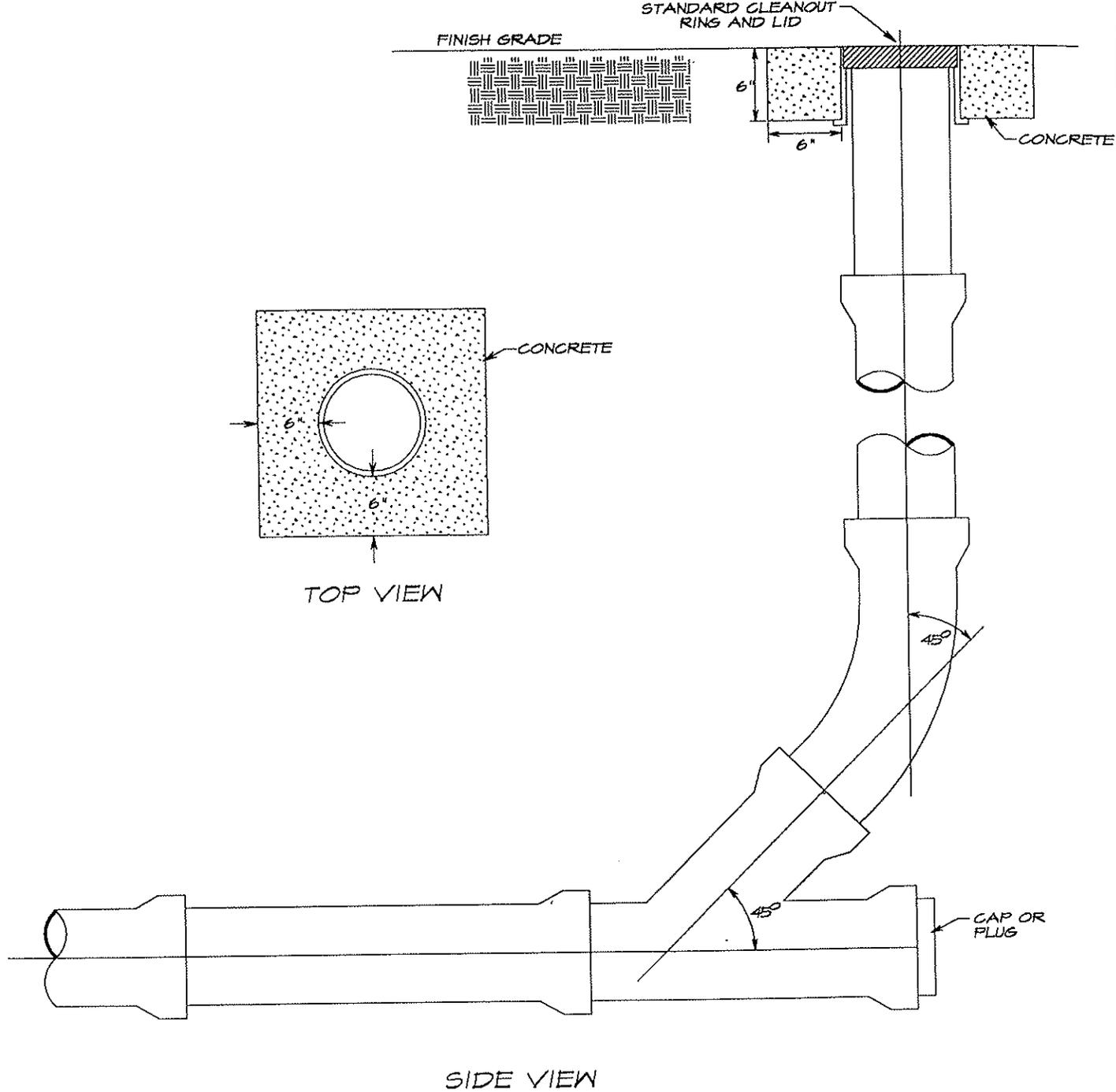
DRAWN BY: RICK E. [Signature]

DATE: JUNE, 2000

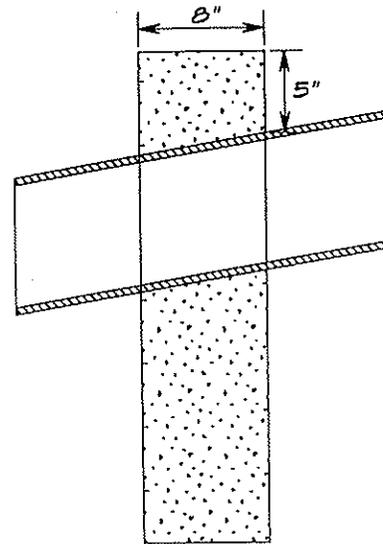
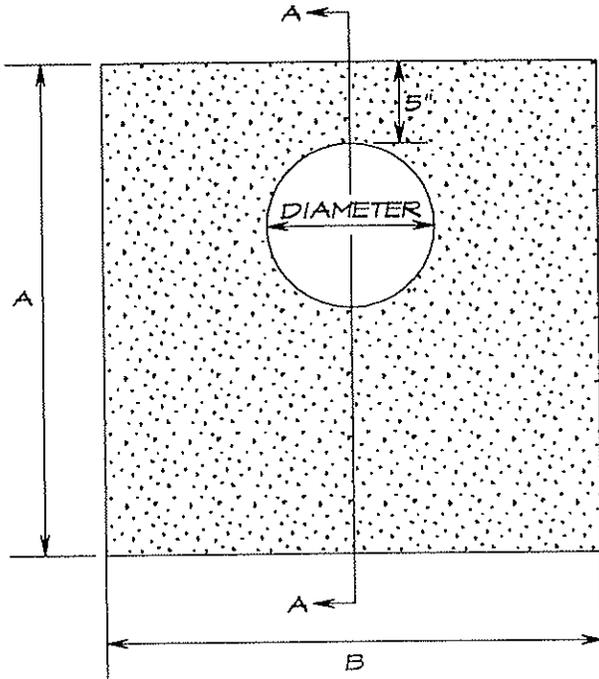
TITLE: TYPE 2 SHALLOW MANHOLE

APPROVED: [Signature] SCALE: NOT TO SCALE

AND STANDARD STUBOUT



CITY OF PENDLETON	ENGINEERING DEPARTMENT
DRAWN BY: RICK B. DATE: DECEMBER 1995 APPROVED: <i>[Signature]</i> SCALE: NOT TO SCALE	TITLE: STANDARD CLEANOUT



SECTION AA

PIPE DIAMETER	A	B
6" - 12"	3' - 0"	4' - 0"
12" - 15"	4' - 0"	4' - 0"
18" - 24"	4' - 0"	5' - 0"

ANCHORS TO BE EQUALLY SPACED:

SLOPE	MINIMUM ANCHOR SPACING CENTER TO CENTER
20% - 34%	35 FEET
30% - 50%	25 FEET
OVER 50%	15 FEET OR CONCRETE ENCASEMENT

CONSTRUCTION NOTES:

CONCRETE TO BE 3000 PSI AT 28 DAYS, 6 SACK MIX  
 PLACE WALL IMMEDIATELY BELOW BELL OF PIPE WHERE POSSIBLE

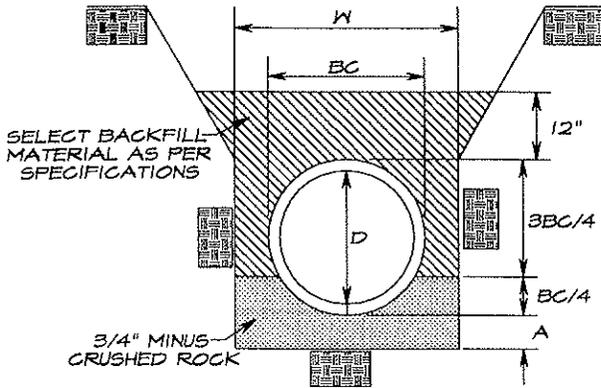
CITY OF FENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK B. DATE: DECEMBER, 1995  
 APPROVED: *[Signature]* SCALE: NOT TO SCALE

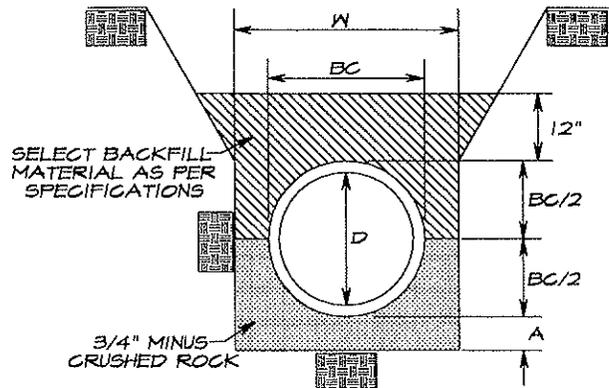
TITLE: ANCHOR WALL STANDARDS

CLASS "A"



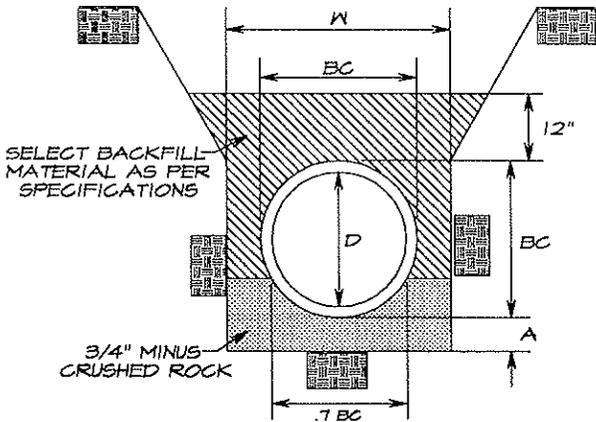
A = 1/4 INSIDE DIAMETER WITH 4" MINIMUM AND 12" MAXIMUM

CLASS "B"



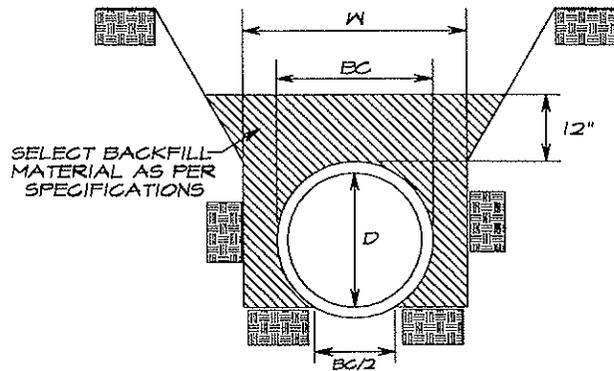
A = 4" FOR 27" PIPE AND SMALLER  
6" FOR 30" PIPE AND LARGER

CLASS "C"



A = 4" FOR 27" PIPE AND SMALLER  
6" FOR 30" PIPE AND LARGER

CLASS "D"



NOTES:

EXCAVATE FOR BELLS ON ALL CLASSES

W = D + 24" FOR D EQUAL OR LESS THAN 24"

W = D + 36" FOR D EQUAL OR GREATER THAN 24"

NOTE: SEE SPECIALS FOR ANY SPECIAL BACKFILL REQUIREMENTS

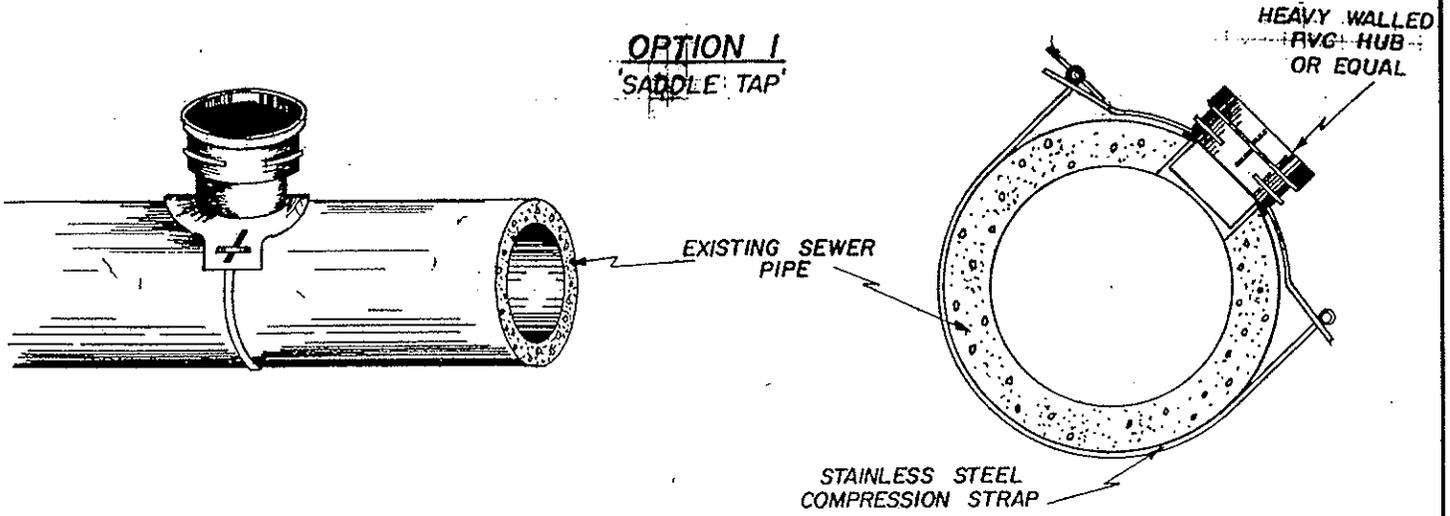
CITY OF PENDLETON

ENGINEERING DEPARTMENT

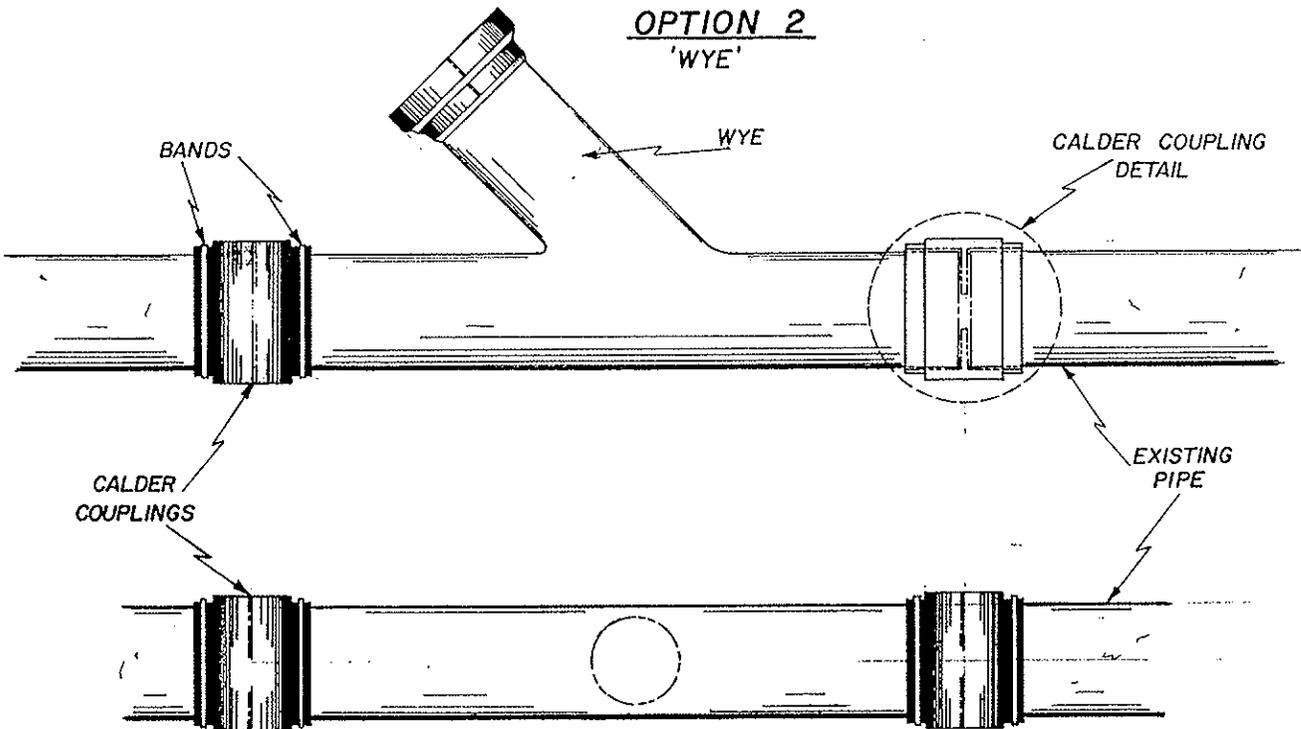
DRAWN BY: RICK B. DATE: DECEMBER 1995  
APPROVED: [Signature] SCALE: NOT TO SCALE

TITLE: SEWER PIPE BEDDING STANDARDS

**OPTION 1**  
**'SADDLE TAP'**



**OPTION 2**  
**'WYE'**



NOTES:

ALL HOLES ARE TO BE UNIFORM, CIRCULAR, AND NO BIGGER THAN THE DIAMETER OF THE SEALING GASKET

DEAD END SEWER LINES WITH LESS THAN .5% GRADE MUST USE OPTION 2.

SEWER TAP SHALL BE REQUIRED TO BE INSTALLED BY A LICENSED PLUMBER.

CITY OF PENDLETON

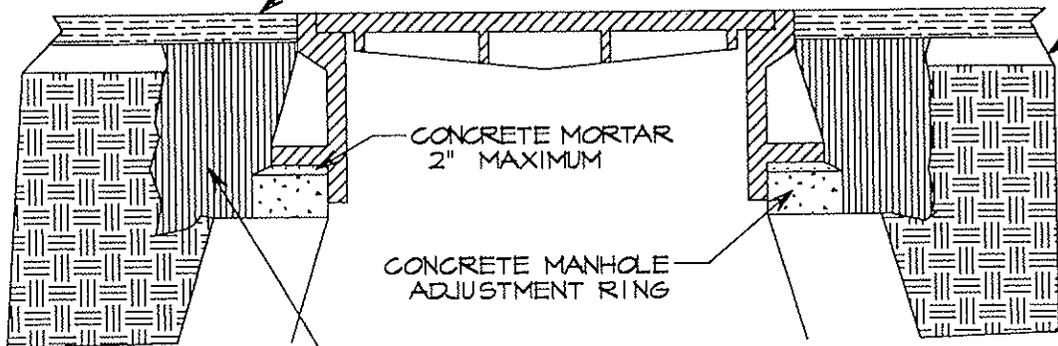
ENGINEERING DEPARTMENT

DN. CSD. DATE: 6/22/80  
 APPR'D *David J. ...* SCALE: NONE  
 CITY ENGINEER

TITLE: SEWER TAP DETAIL

ASPHALT CONCRETE WEARING COURSE

ASPHALT CONCRETE BASE COURSE



CONCRETE MORTAR  
2" MAXIMUM

CONCRETE MANHOLE  
ADJUSTMENT RING

BACKFILL WITH ASPHALT  
AND COMPACT

MANHOLE ADJUSTMENT SEQUENCE DETAIL

1. COVER MANHOLE WITH BUILDING PAPER AND CONSTRUCT ASPHALT CONCRETE BASE COURSE.
2. CUT SQUARE OR CIRCULAR EXCAVATION AROUND MANHOLE 12" MINIMUM FROM MANHOLE FRAME.
3. RAISE MANHOLE FRAME AND COVER TO FINISH GRADE BY INSTALLING CONCRETE RINGS AND LEVELING MORTAR.  
NOTE: IF THE TOTAL OF THE CONCRETE RINGS NEEDED IS 12" OR MORE AN ADDITIONAL 12" MANHOLE BARREL WILL BE REQUIRED.
4. BACKFILL WITH ASPHALT AND COMPACT TO THE TOP OF ASPHALT CONCRETE BASE COURSE.
5. CONSTRUCT ASPHALT CONCRETE WEARING COURSE.

NOTE: THIS SPECIFICATION APPLIES TO EXISTING AND OR NEW MANHOLES

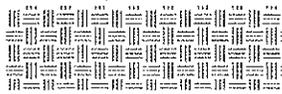
CITY OF PENDLETON		ENGINEERING DEPARTMENT	
DN: RLY	DATE: 7/25/96	TITLE: MANHOLE ADJUSTMENT	
APPVD. <i>[Signature]</i>	SCALE: N. T. S.		
CITY ENGINEER			

IF LOCATE WIRE EXISTS EXTEND WIRE TO TOP OF POST

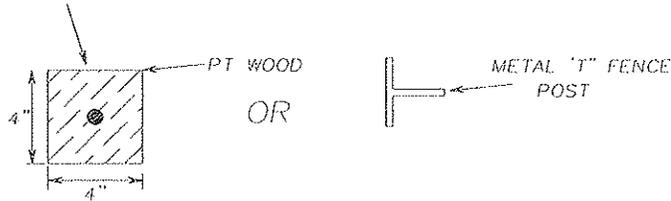
PT WOOD 4" X 4" OR STANDARD "T" POST

DEPTH TO INVERT ANNOTATED ON POST

FINISH GRADE



IF PT WOOD POST IS BELOW GROUND PLACE FERROUS METAL SPIKE IN MIDDLE OF POST



TOP VIEWS

APPROVAL MANNER:

CAP END OF STUB-OUT OR ABANDONED LINE WITH WATER TIGHT CAP AND PLACE PRESSURE TREATED 4" X 4" POST OR METAL FENCE POST DIRECTLY BEHIND CAP AND UP TO GROUND SURFACE. IF LOCATE WIRE IS PRESENT, BRING LOCATE WIRE TO TOP OF POST. POST SHALL THEN BE FIELD LOCATED USING SURVEY METHODS OR SWING TIES. A LOCATE SKETCH OR AS BUILT DRAWING SHALL BE SUBMITTED TO THE CITY ENGINEERING DEPARTMENT. SWING TIES SHALL BE FROM PERMANANT STRUCTURES OR MONUMENTS AND DEPTH TO INVERT SHALL BE NOTED ON SKETCH AND ON MARKER POST.

EXISTING SEWER LATERAL OR STUB-OUT

WATER TIGHT CAP OR PLUG

PLACE POST AGAINST CAP

← TO SEWER MAIN

5 FEET MAXIMUM

SIDE VIEW

0.5 FEET MIN.

LOCATE WITHIN 5 FEET OF ROW LINE

ROW LINE

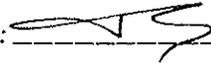
ROW LINE

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: GAC

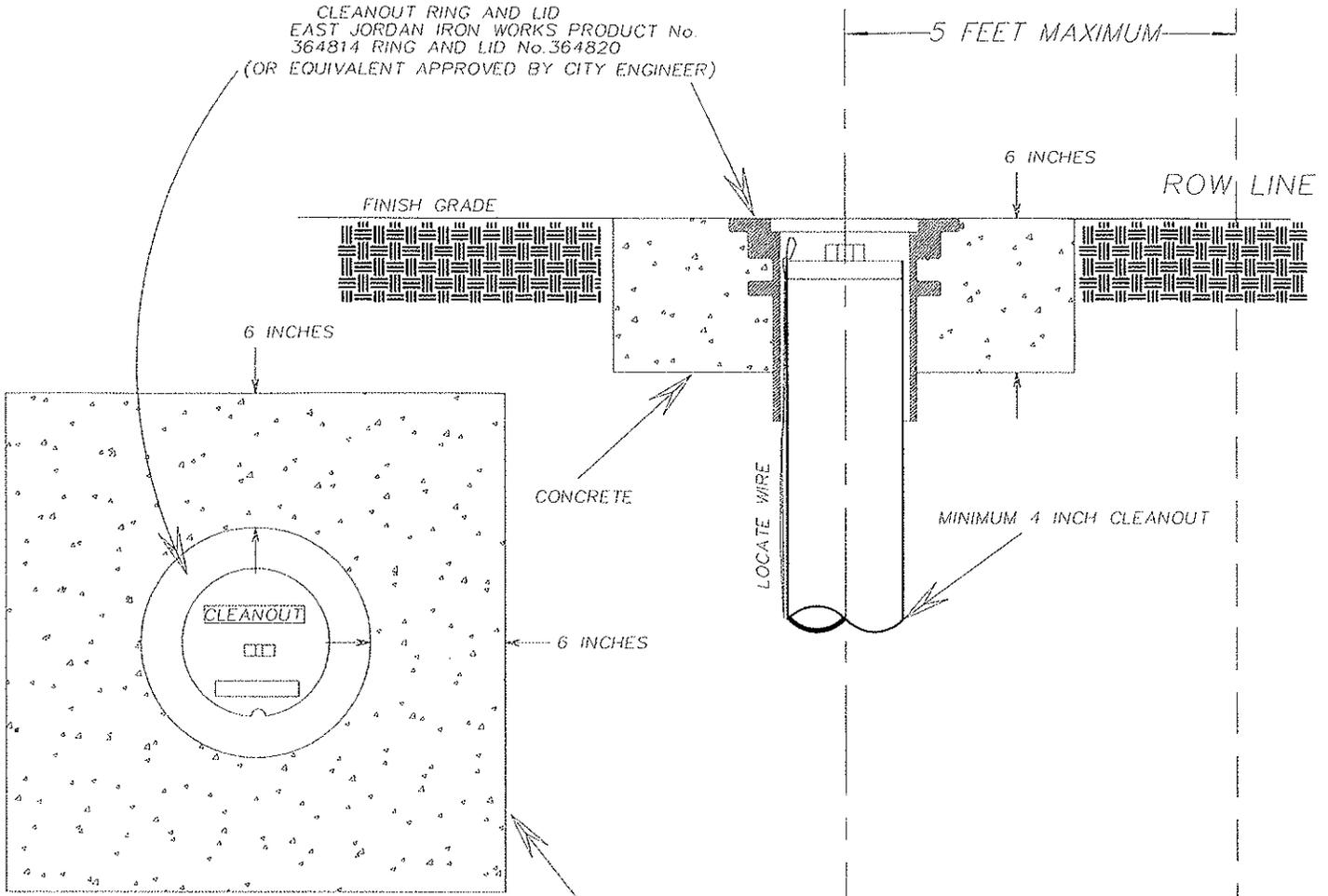
DATE: NOVEMBER 2006

APPROVED: 

SCALE: NOT TO SCALE

TITLE: DEMOLITION OR STUB OUT SEWER CAP

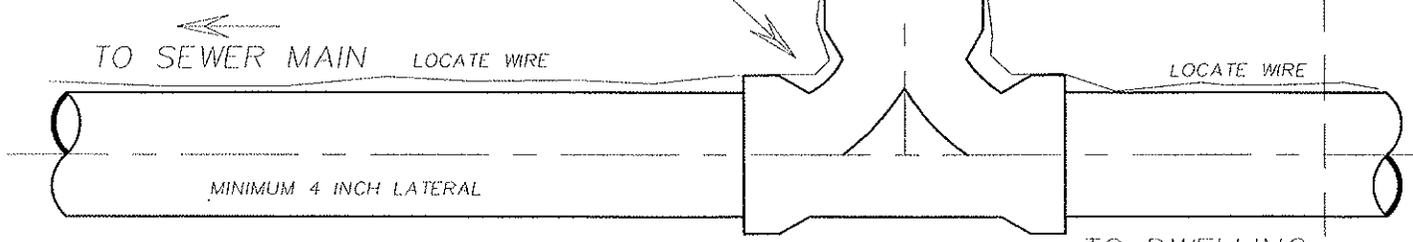
CLEANOUT RING AND LID  
 EAST JORDAN IRON WORKS PRODUCT No.  
 364814 RING AND LID No.364820  
 (OR EQUIVALENT APPROVED BY CITY ENGINEER)



TOP VIEW

6" CONCRETE PAD AROUND  
 CLEANOUT. SLOPE PAD SURFACE  
 AWAY FROM CENTER.

CHARLOTTE PIPE &  
 FOUNDARY PART No. 448  
 4" TWO-WAY CLEANOUT  
 (OR EQUIVALENT APPROVED BY CITY ENGINEER)

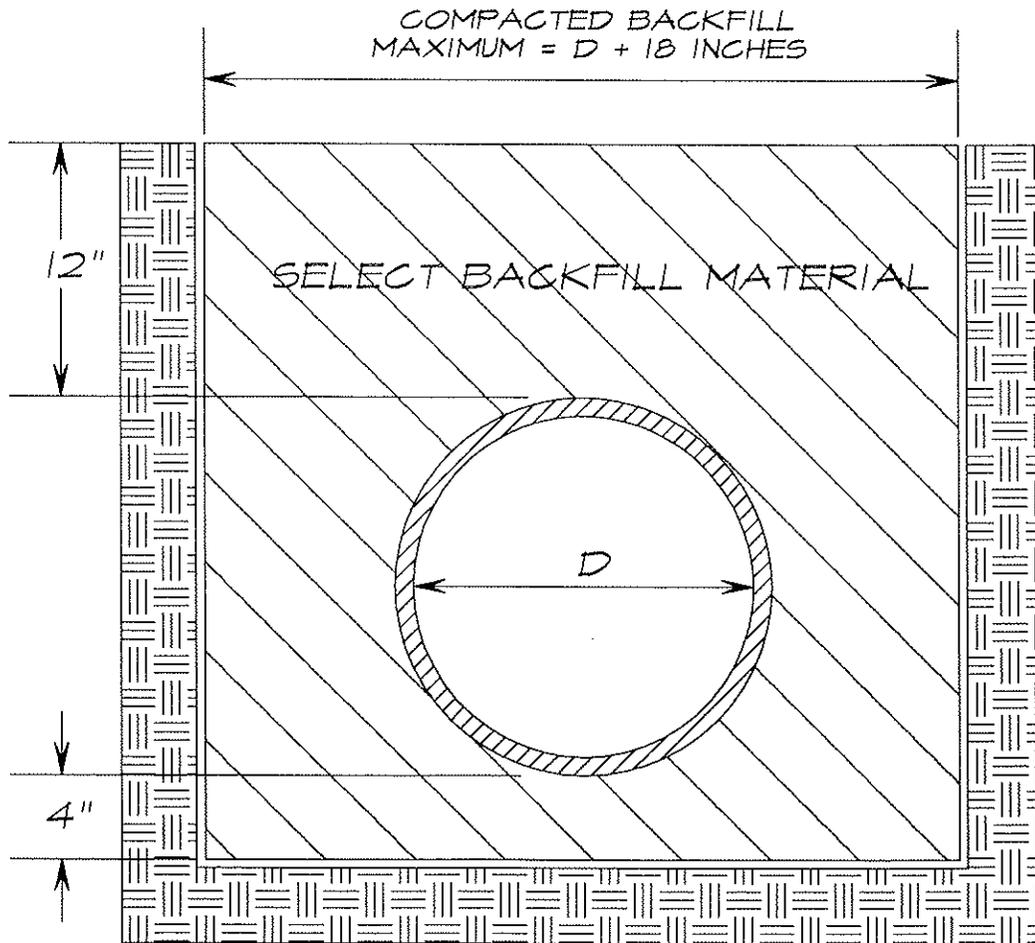


SIDE VIEW

\* CLEANOUT TO BE LOCATED BETWEEN BACK OF CURB  
 AND ROW LINE, A MAXIMUM OF 5' FROM ROW LINE

CITY OF PENDLETON		ENGINEERING DEPARTMENT	
DRAWN BY: G.A.C.	DATE: NOVEMBER 2006	TITLE: TWO WAY CLEANOUT	
APPROVED:	SCALE: NOT TO SCALE		

# TRENCH EXCAVATION IN ROCK



NOTE: SEE SPECIAL FOR ANY SPECIAL BACKFILL REQUIREMENTS

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICH B.

DATE: DECEMBER 1995

APPROVED:  SCALE: NOT TO SCALE

TITLE: WATER PIPE BEDDING  
( ROCK ) STANDARDS