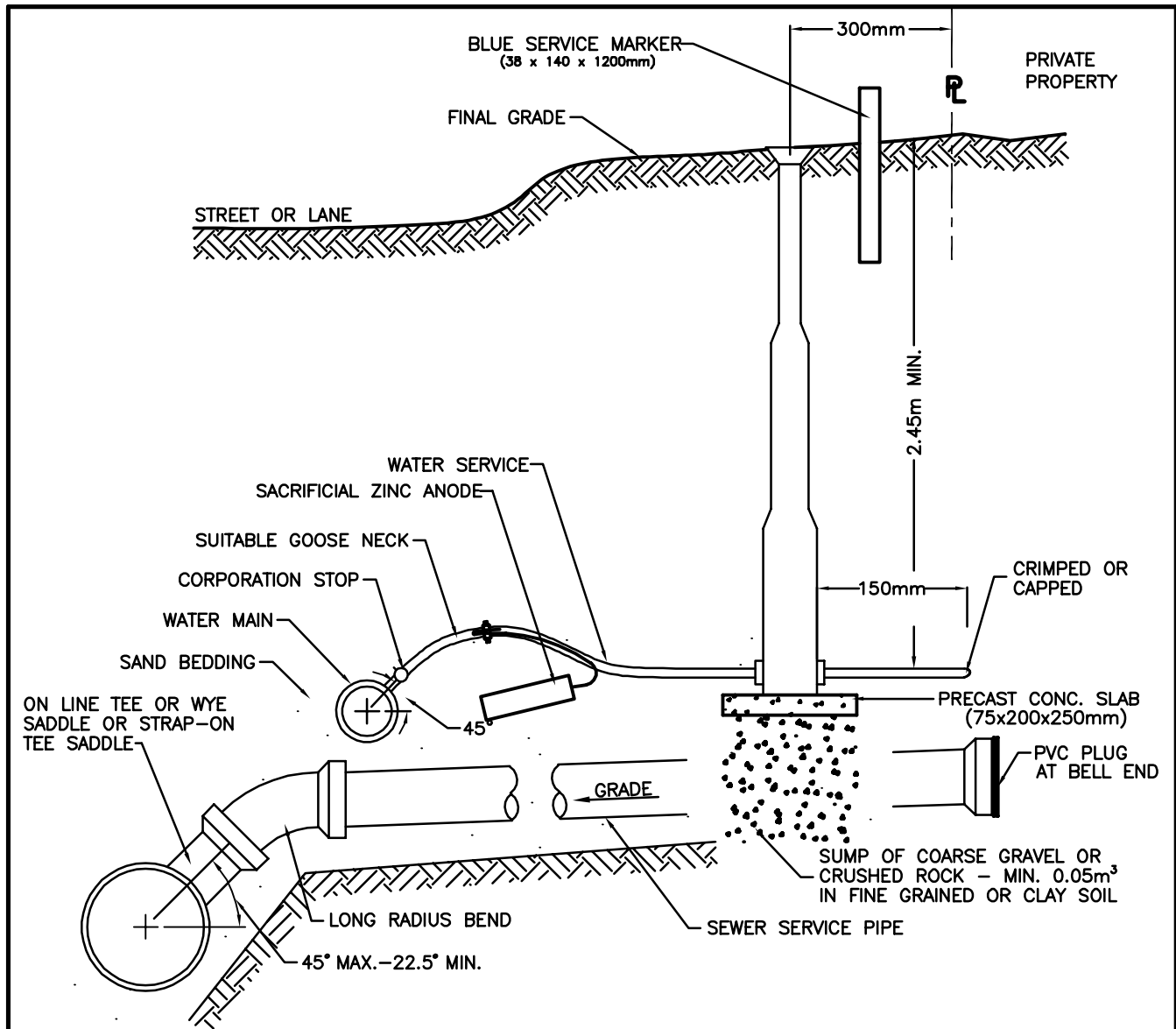




City of Estevan

Standard Details



NOTES:


1. SEWER SERVICE PIPE TO BE TERMINATED AT PROPERTY LINE AND PLUGGED AS SPECIFIED.
2. WATER SERVICE PIPE TO BE TERMINATED AND CRIMPED OR CAPPED AS SHOWN.
3. WATER SERVICE LINE TO BE LOCATED ON THE UPSTREAM SIDE OF THE SEWER LINE WITH RESPECT TO SANITARY SEWER MAIN FLOW.
4. ALL SERVICES SHALL BE LOCATED AT THE CENTRE LINE OF LOT UNLESS NOTED OTHERWISE ON DRAWINGS.
5. FOR SEWER SERVICE CONNECTIONS TO DEEP MAINS (>3.5m) SEE DETAIL DWG AB-2.
6. MINIMUM GRADE FOR SEWER SERVICE
 2% FOR 100mm PIPE
 1% FOR 150mm PIPE
7. SEWER SERVICE PIPE SIZE TO BE NO MORE THAN 2 PIPE SIZES SMALLER THAN MAIN. (UNLESS CONNECTION IS MADE WITH MANUFACTURED TEE OR WYE AT MAIN)
8. SACRIFICIAL ANODE INSTALLATION FOR EXISTING COPPER WATER SERVICES TO BE PACKAGED
 10.9 kg (24 lb) ZINC TYPE II STANDARD ALLOY C/W 3m #12 SOLID LEAD WIRE & GROUND CLAMP

No.	Date	Revision	App'd
4	6/04	CATHODIC ON COPPER SERVICE	GJW
3	7/03	TEXT	GJW
2	01/99	TEXT	FNK
1	06/98	NOTES, DIMENSIONS, TITLE	FNK

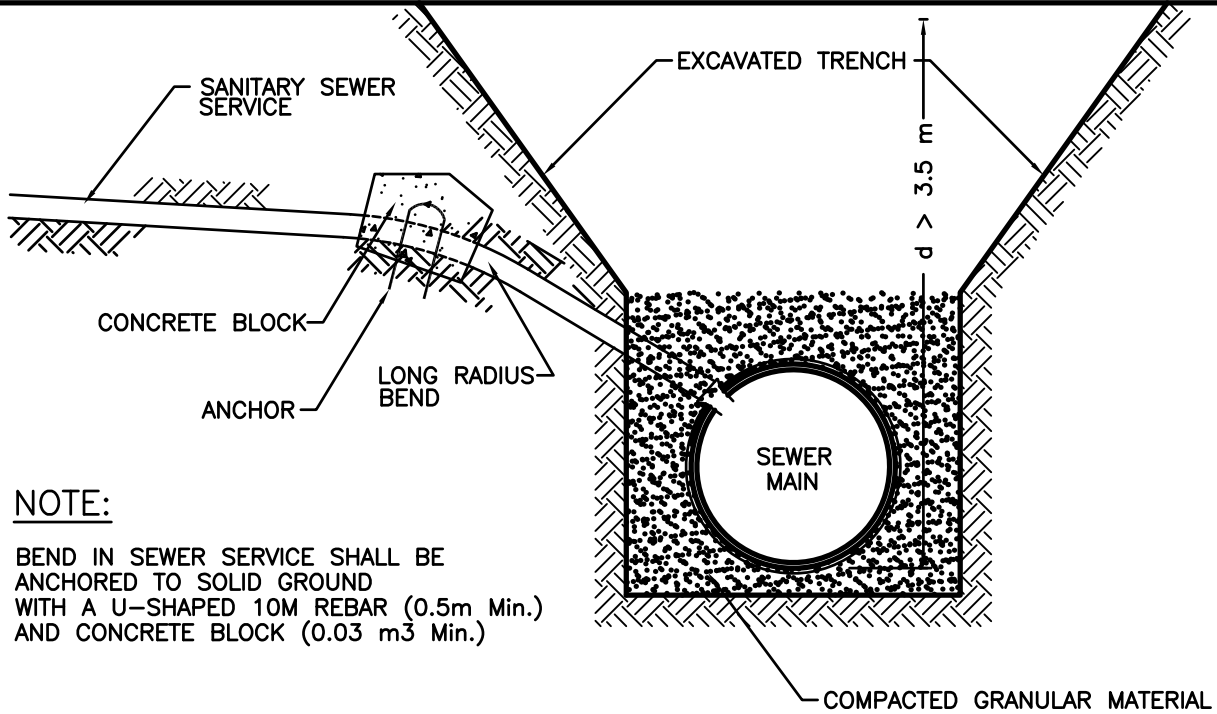
Drawn By : T.M.V.
Checked By : F.N.K.
Date : DEC. 6, 1998
Scale : N.T.S.
Approved By:
City Engineer

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

WATER AND SANITARY SEWER
 BUILDING SERVICES



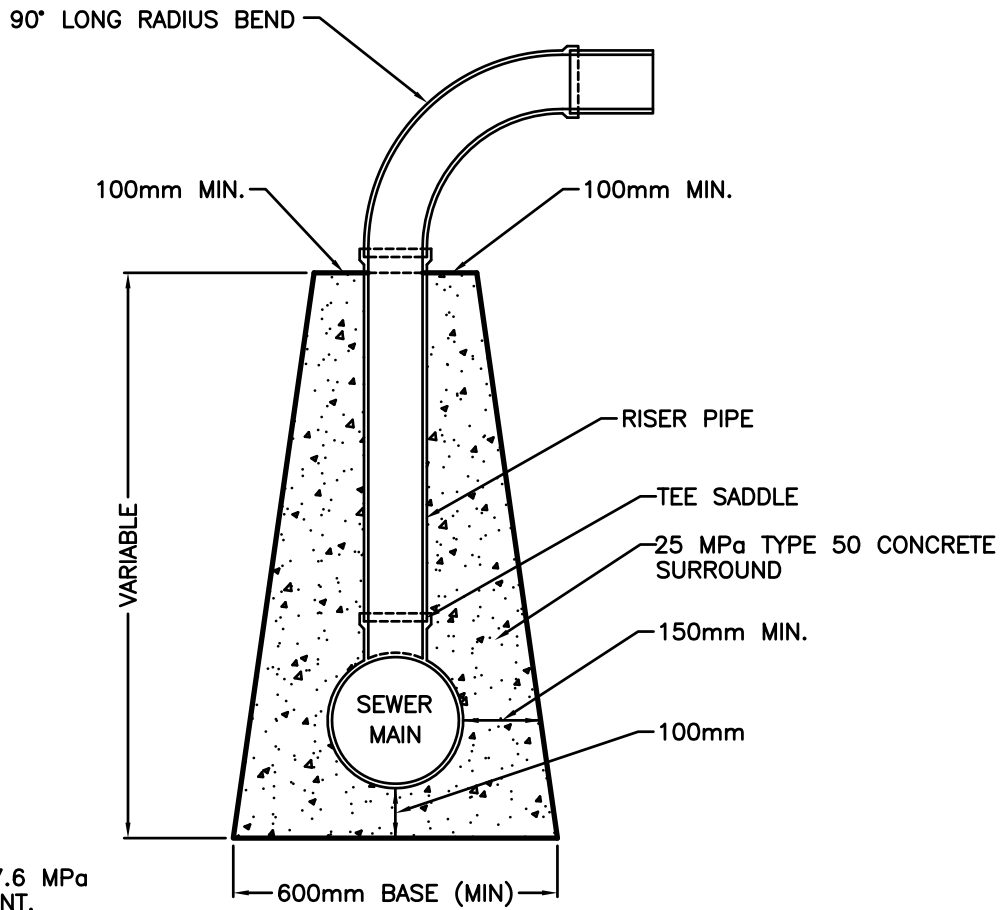
Detail Drawing No. **AB-1**



NOTE:

BEND IN SEWER SERVICE SHALL BE ANCHORED TO SOLID GROUND WITH A U-SHAPED 10M REBAR (0.5m Min.) AND CONCRETE BLOCK (0.03 m³ Min.)

RISER TO SEWER MAIN



NOTE:

1. CONCRETE TO BE 27.6 MPa & SULPHATE RESISTANT.

VERTICAL RISER

Drawn By : S.B.F.
Checked By : G.J.W.
Date : OCT 28, 1993
Scale : N.T.S.
Approved By:
City Engineer

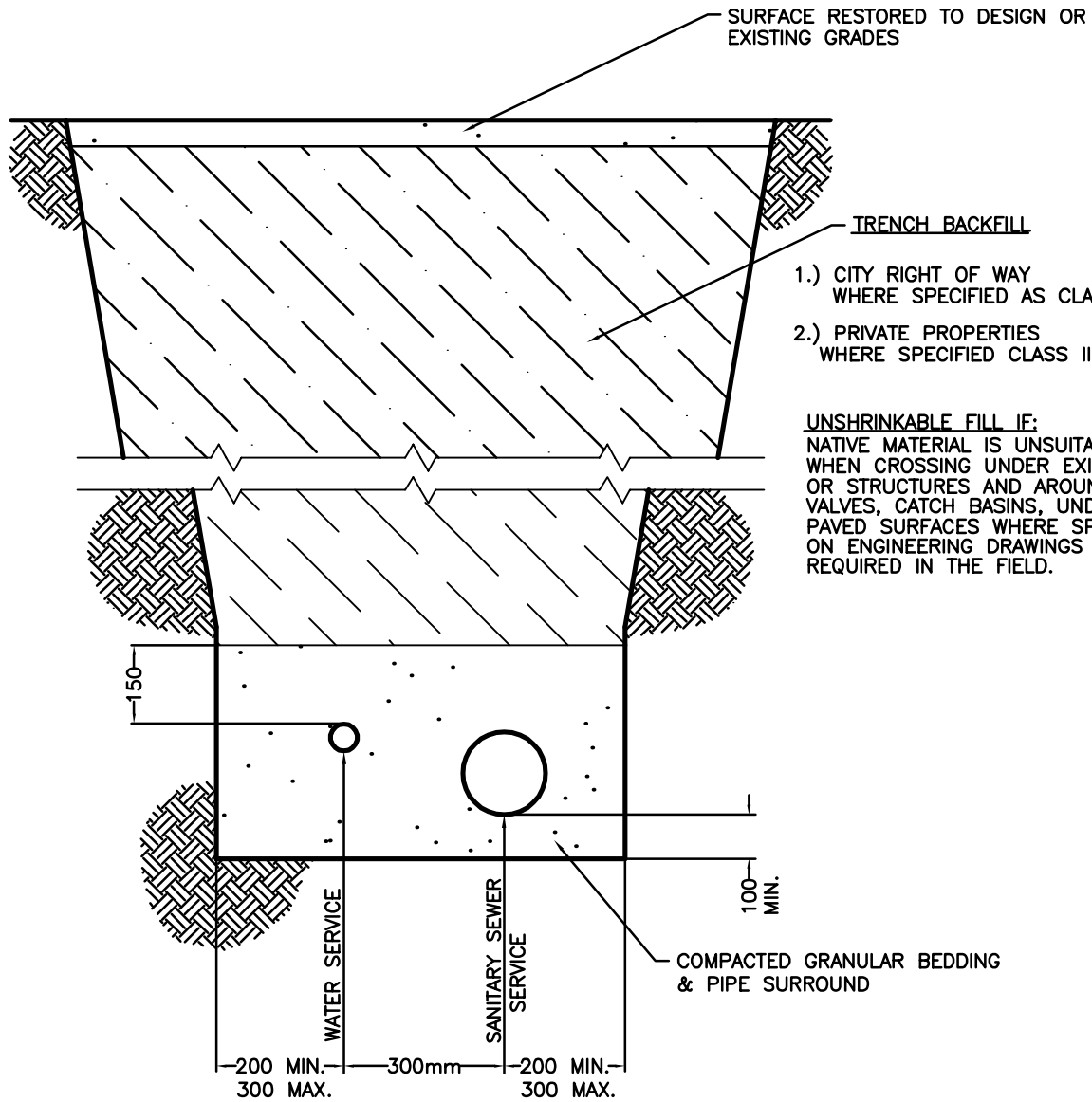
CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

SEWER SERVICE CONNECTIONS TO DEEP MAINS



No.	Date	Revision	App'd
2	03/99	NOTES	LMN
1	06/98	TITLE & NOTES	FNK

BACKFILL REQUIREMENTS FOR SERVICES




No.	Date	Revision	App'd
1	7/03	TEXT	GJW

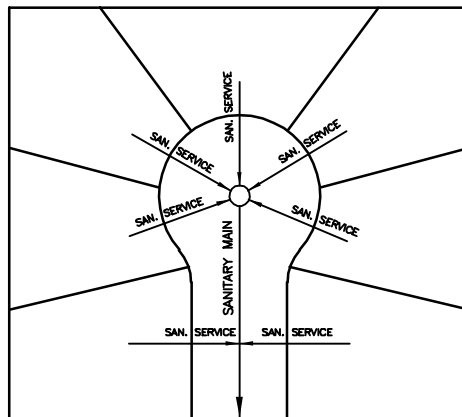
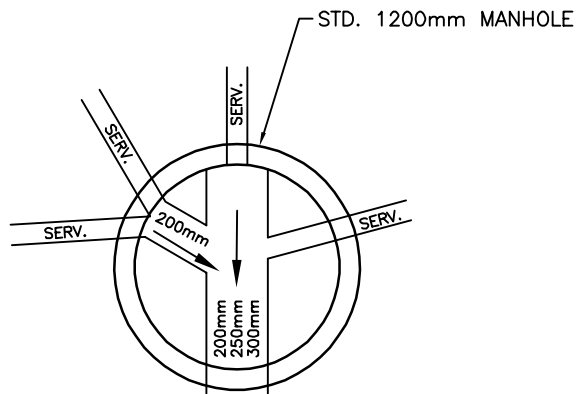
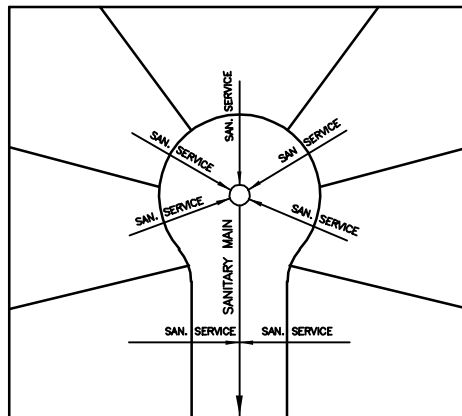
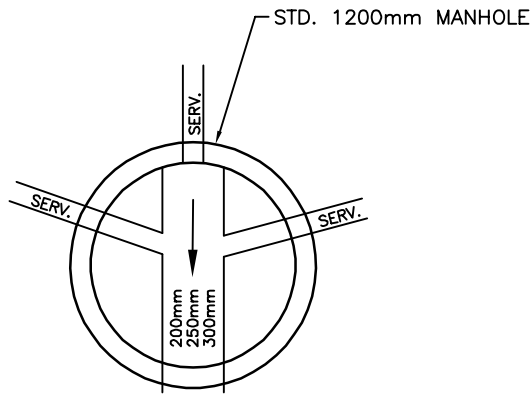
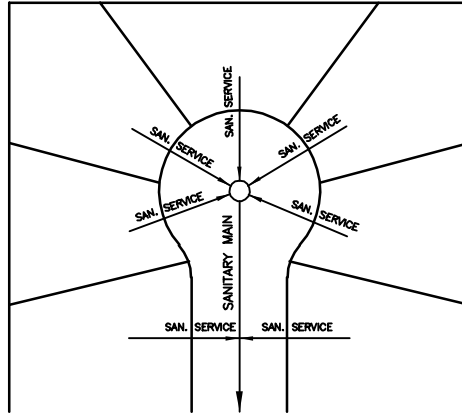
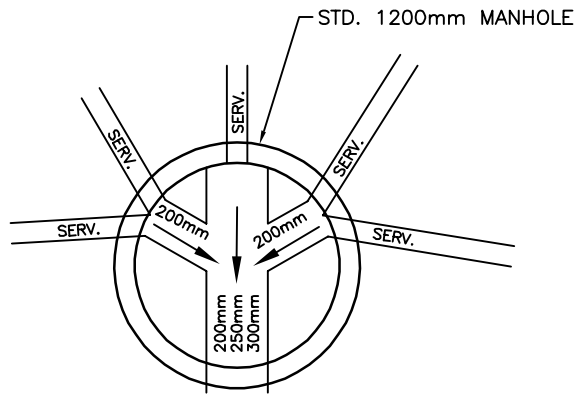
Drawn By : S.B.F.
Checked By : F.N.K.
Date : JUNE 24, 1998
Scale : N.T.S.
Approved By:
City Engineer

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

PIPE BEDDING AND BACKFILL



Detail Drawing No. **AB-3**



NOTES:

1. IN CASE OF MORE THAN 5 CONNECTIONS INTO A MANHOLE, A DETAILED DRAWING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. SANITARY MAIN TO GO STRAIGHT THROUGH MANHOLE WITH 1/2 PIPE TO OPPOSITE WALL.
3. MAXIMUM HEIGHT OF INLET 300mm ABOVE INVERT OF OUTLET.
4. BENCHING TO ACCOMMODATE BRANCH CONNECTIONS.
5. SERVICE CONNECTIONS INTO BARREL TO BE MACHINE CORED.

			Drawn By : T.M.V.
			Checked By : G.J.W.
			Date : November 30, 1993
			Scale : N.T.S.
			Approved By:
No.	Date	Revision	App'd City Engineer

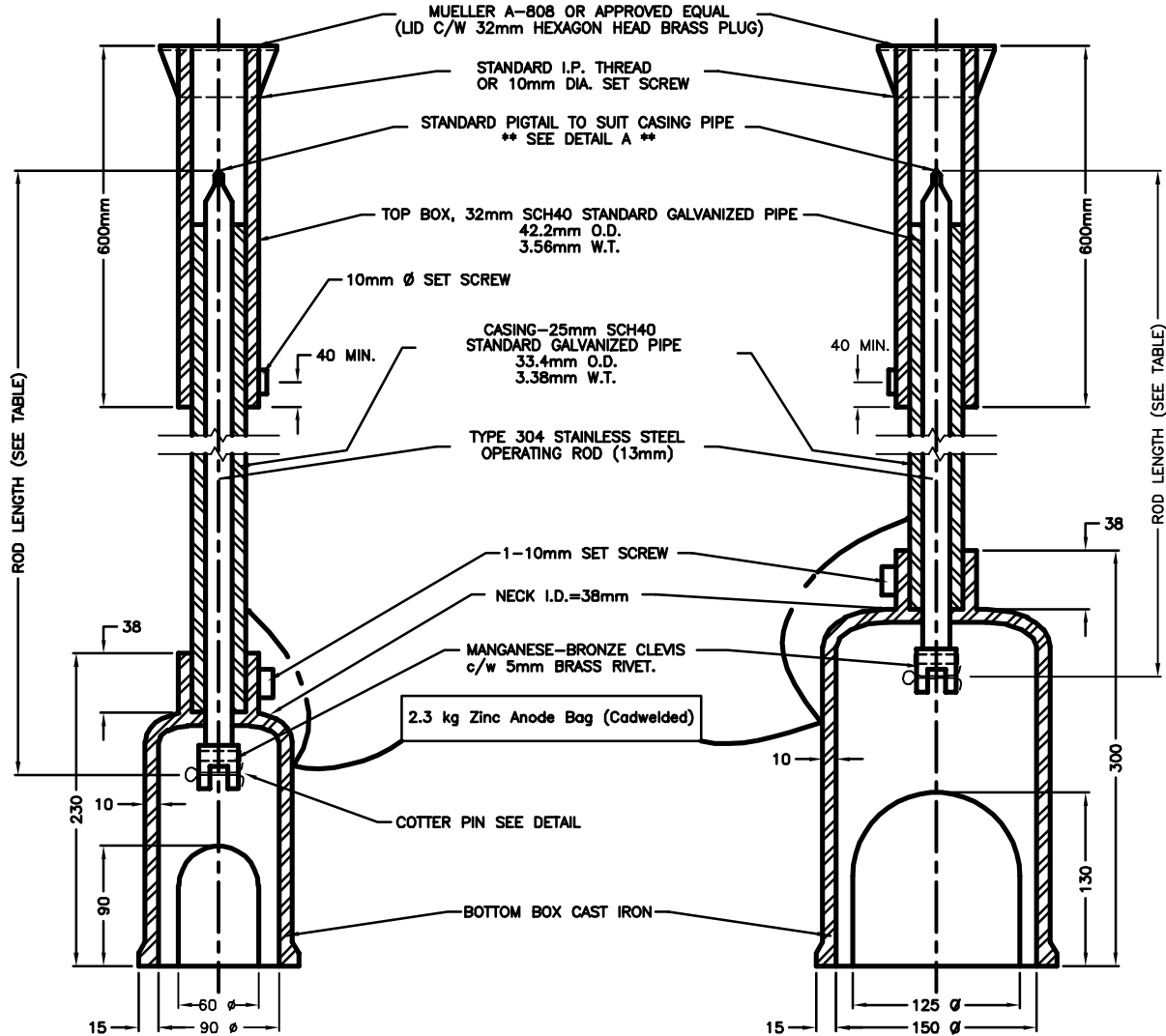
CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

**SERVICE CONNECTION DETAILS FOR SANITARY
MANHOLES IN A CUL-DE-SAC**

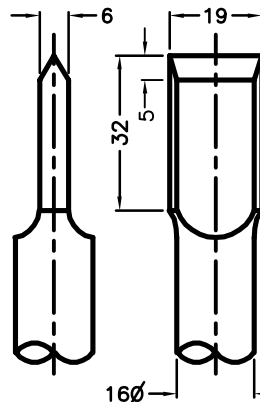
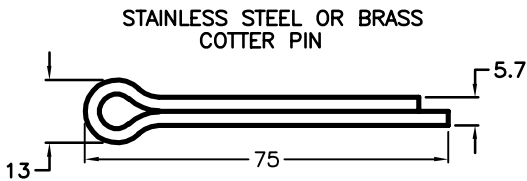


FOR 20mm & 25mm VALVES

FOR 32mm, 40mm & 50mm VALVES



DEPTH OF COVER	ROD LENGTH	CASING LENGTH
2.45m	2.25m	2.10m
2.75m	2.55m	2.40m
3.05m	2.85m	2.70m



NOTE:

- 1.) THE EXTERIOR & INTERIOR OF THE BOTTOM BOX AND THE EXTERIOR OF THE CASING AND TOP SHALL BE FACTORY COATED WITH ASPALTIC VANISH.
- 2.) APPROVED PVC BOX/ CASING MAY BE SUBSTITUTED SUBJECT TO PRIOR APPROVAL BY ENGINEERING SERVICES FACTORY COATED WITH ASPALTIC VANISH.

** TO CONFORM WITH ANSI/AWWA C800-84 SECTION A.6 **

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

DETAIL A

		Drawn By : T.M.V.
		Checked By : F.N.K.
		Date : DEC. 6, 1993
		Scale : N.T.S.
2	7/03	TEXT
1	06/98	TITLE & NOTES
No.	Date	Revision
		App'd
		City Engineer

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

**SERVICE BOX DETAILS
FOR SERVICE VALVES**

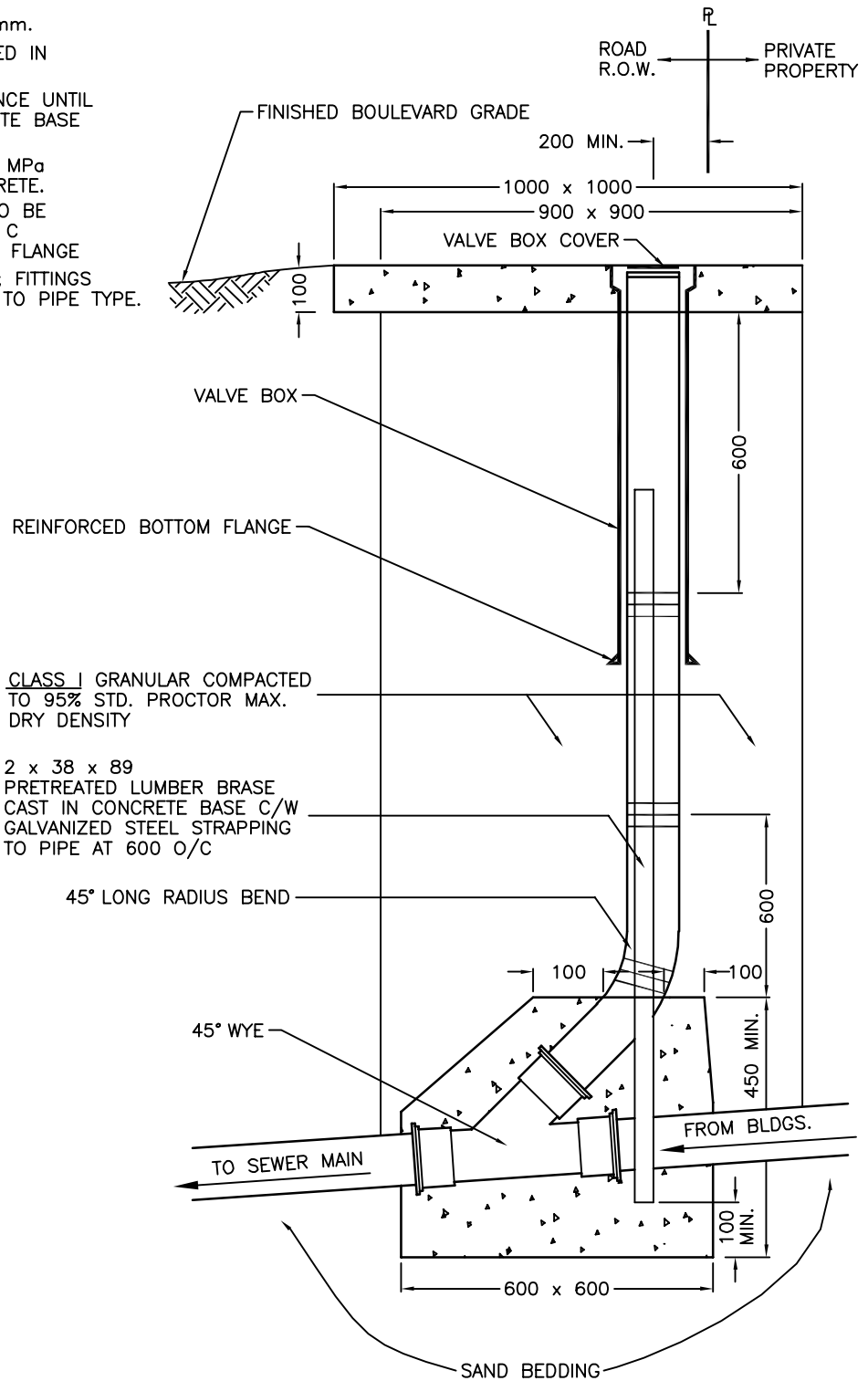


Detail Drawing No.

AB-5

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. CLEAN OUT TO BE LOCATED IN PUBLIC RIGHT OF WAY
3. BACKFILL NOT TO COMMENCE UNTIL 12 HOURS AFTER CONCRETE BASE HAS BEEN POURED.
4. ALL CONCRETE TO BE 25 MPa SULFATE RESISTANT CONCRETE.
5. VALVE BOX AND COVER TO BE NORWOOD FOUNDRY TYPE C C/W REINFORCED BOTTOM FLANGE
6. PIPE TO BE PVC SDR 35; FITTINGS TO BE PVC CONFORMING TO PIPE TYPE.



No.	Date	Revision	App'd	City Engineer

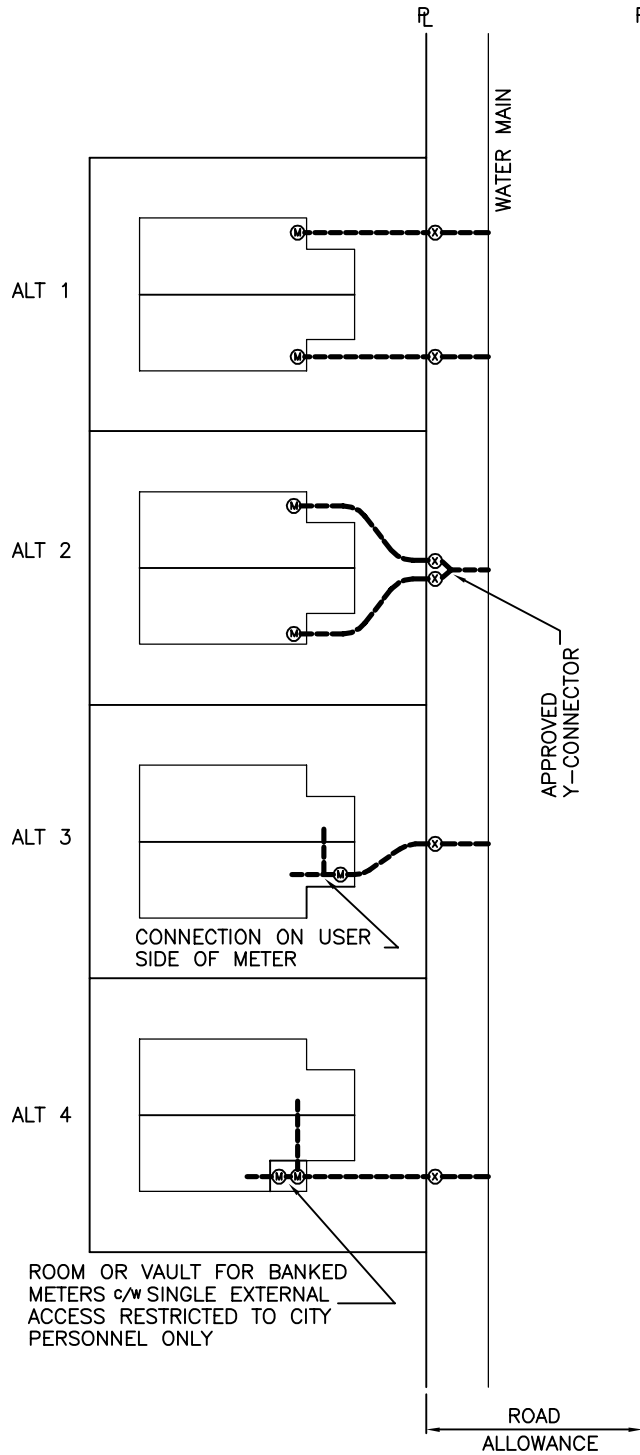
CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT
 CLEAN-OUT DETAIL
 SEWER SERVICE CONNECTIONS TO
 GROUPED BUILDINGS ON A LOT



Detail Drawing No. **AB-6**

NOTES:

1. ALT 1 IS THE PREFERRED METHOD OF SERVICING. SPECIAL APPROVAL FROM THE ENGINEERING DIVISION MUST BE OBTAINED FOR ALT. 2, 3 OR 4.
2. MAINTAIN THE FOLLOWING CLEARANCES OF WATER SERVICE PIPE
 - 3.0m TO PROPERTY LINES & BUILDINGS
 - 3.0m TO POLES, TRANSFORMER PADS
 STREET LIGHTS, HYDRANTS, CATCH BASINS, ETC.
3. SERVICE PIPE:
 - 25mm DIAMETER OR LESS: TYPE "K" COPPER ONLY
 - 25mm DIAMETER & LARGER: TYPE "K" COPPER OR POLYETHELENE PIPE SERIES 160
4. MAXIMUM SIZE DIRECT TAPPED CONNECTION = 25mm SADDLE CLAMP CONNECTOR FOR SERVICE SIZES GREATER THAN 25mm
5. MAXIMUM WATER METER SIZE 20mm. SPECIAL APPROVAL FROM ENGINEERING DEPARTMENT MUST BE OBTAINED FOR LARGER SIZES.



LEGEND:

- CURB STOP, BOX
- WATER METER
- WATER SERVICE

				Drawn By : T.M.V.
				Checked By : G.J.W.
				Date : November 30, 1993
				Scale : N.T.S.
				Approved By:
No.	Date	Revision	App'd	City Engineer

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

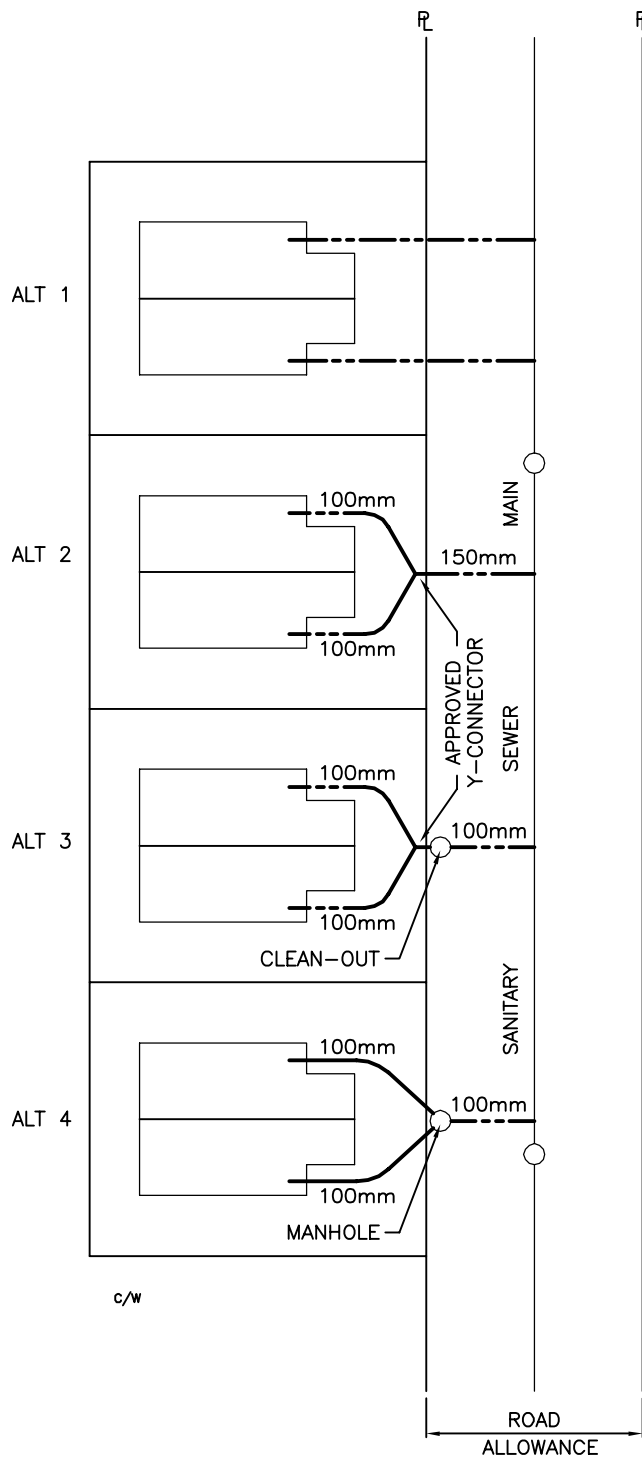
WATER SERVICE CONNECTIONS TO
GROUPED BUILDINGS ON A LOT



Detail Drawing No. **AB-7**

NOTES:

1. ALT 1 IS THE PREFERRED METHOD OF SERVICING. SPECIAL APPROVAL FROM THE ENGINEERING DIVISION MUST BE OBTAINED FOR ALT. 2, 3 OR 4.
2. MAINTAIN THE FOLLOWING CLEARANCES OF SEWER SERVICE PIPE
 - 3.0m TO PROPERTY LINES & BUILDINGS
 - 3.0m TO POLES, TRANSFORMER PADS
 - STREET LIGHTS, HYDRANTS, CATCH BASINS, ETC.
3. FOR CLEAN OUT DETAILS SEE DRAWING #
4. PIPE TO BE PVC SDR 35. FITTINGS TO CONFORM TO PIPE TYPE.
5. MANHOLE WILL BE REQUIRED IF SERVICE PIPE DIAMETER, AT CONNECTION TO MAIN, IS SMALLER THAN MAIN DIAMETER BY 2 PIPE SIZES OR LESS.
6. TEST MANHOLES MAY BE REQUIRED FOR COMMERCIAL AND INDUSTRIAL ESTABLISHMENTS.



**** SANITARY SERVICE PIPE DIAMETERS SHOWN ****

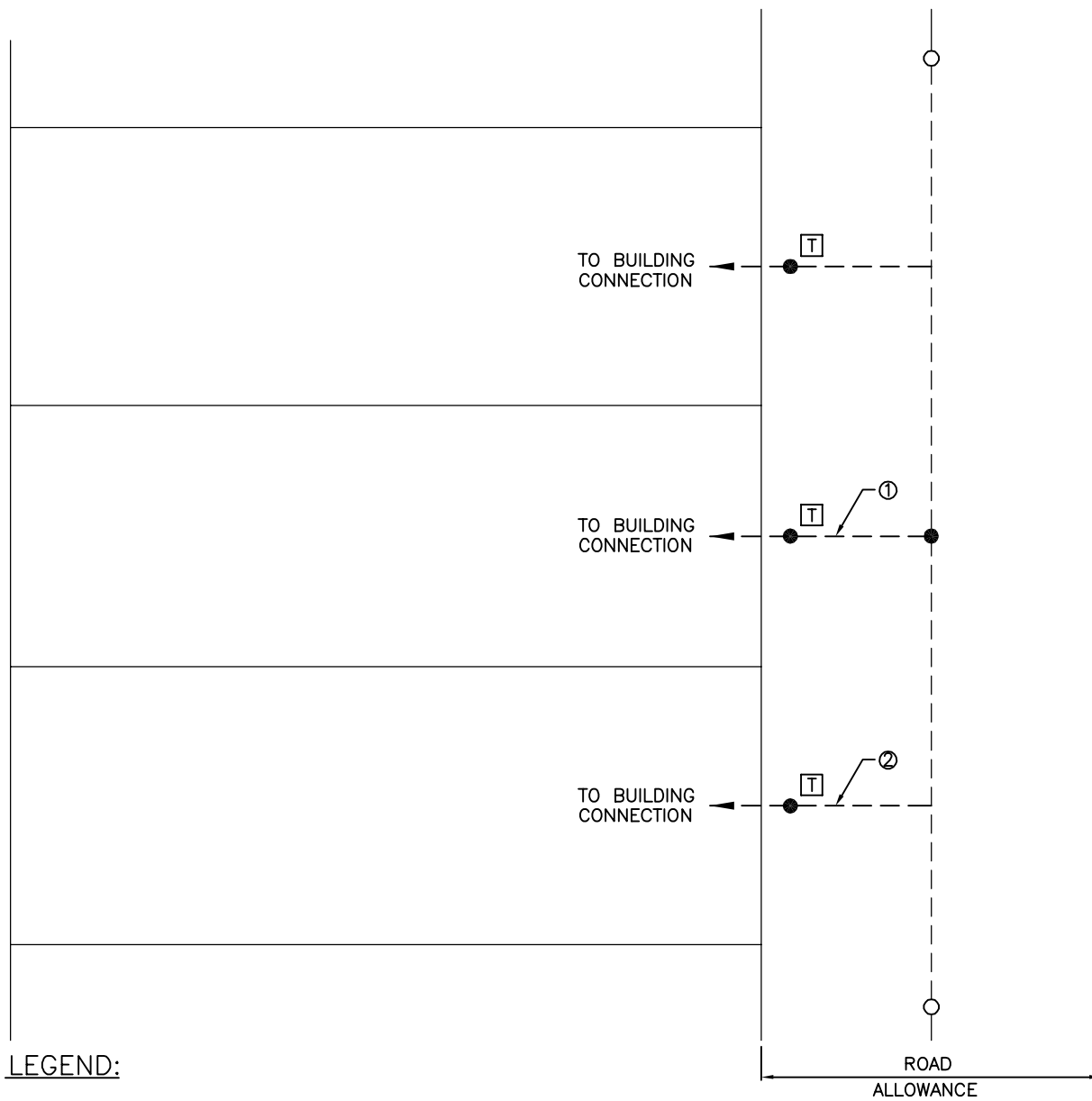
No.	Date	Revision	App'd	City Engineer	

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

SANITARY SERVICE CONNECTIONS TO
GROUPED BUILDINGS ON A LOT



Detail Drawing No. **AB-8**



LEGEND:

- EXISTING SANITARY SEWER MAIN & MANHOLE
- NEW MANHOLE REQUIRED ON SANITARY SEWER MAIN
- [T]--- NEW TEST MANHOLE WHERE REQUIRED

NOTES:

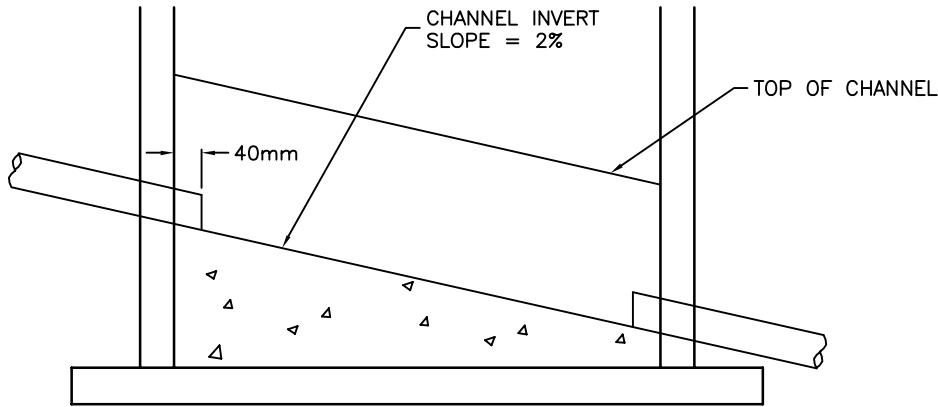
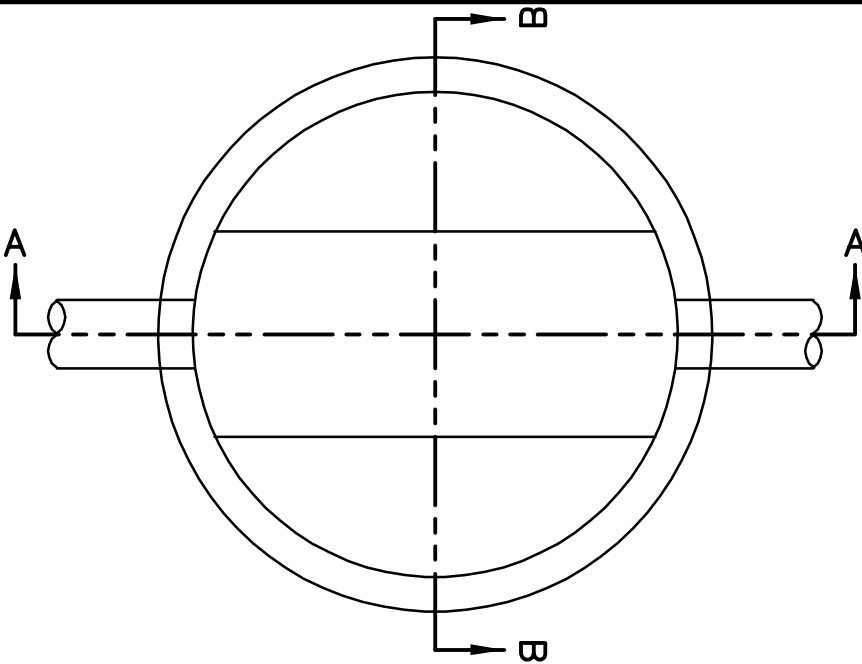
- ① TYPICAL SERVICE CONNECTION TO SEWER MAIN WHERE MAIN DIAMETER IS AT LEAST 2 PIPE SIZES LARGER THAN THE SERVICE PIPE DIAMETER.
- ② TYPICAL SERVICE CONNECTION TO SEWER MAIN WHERE SERVICE PIPE DIAMETER IS LESS THAN MAIN PIPE DIAMETER BY 2 PIPE SIZES

				Drawn By : T.M.V.
				Checked By : G.J.W.
				Date : December 1, 1993
				Scale : N.T.S.
				Approved By:
No.	Date	Revision	App'd	City Engineer

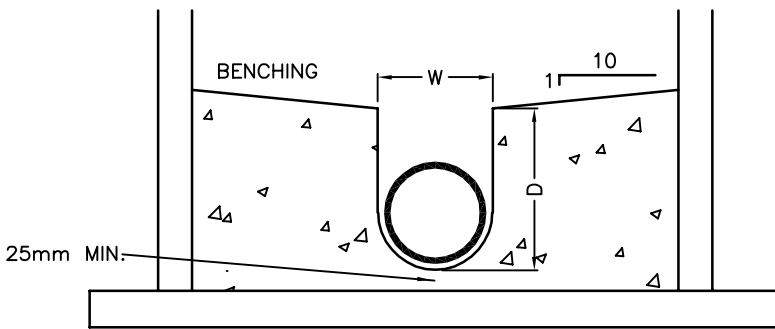
CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT

TYPICAL LAYOUT FOR INDUSTRIAL/COMMERCIAL
 SEWER SERVICE WITHIN PUBLIC R.O.W.





SECTION A-A



SECTION B-B

- 1) FOR MANHOLE CONSTRUCTION DETAILS
SEE DRAWINGS AS-1 & AS-9
- 2) CHANNEL WIDTH REQUIREMENTS:

PIPE DIA.(mm)	CHANNEL WIDTH (mm)
100	150
150	200
200	250

- 3) CHANNEL DEPTH REQUIREMENTS:

PIPE DIA. (mm)	CHANNEL DEPTH (mm)
100	150
150	200
200	250

			Drawn By : T.M.V.
			Checked By : G.J.W.
			Date : October 15, 1993
			Scale : N.T.S.
			Approved By:
1	6/19/95	Re-arranged Sections, add hatching	
No.	Date	Revision	App'd City Engineer

CITY OF ESTEVAN
ENGINEERING & PUBLIC WORKS DEPARTMENT



STANDARD TEST MANHOLE

Detail Drawing No. **AB-10**