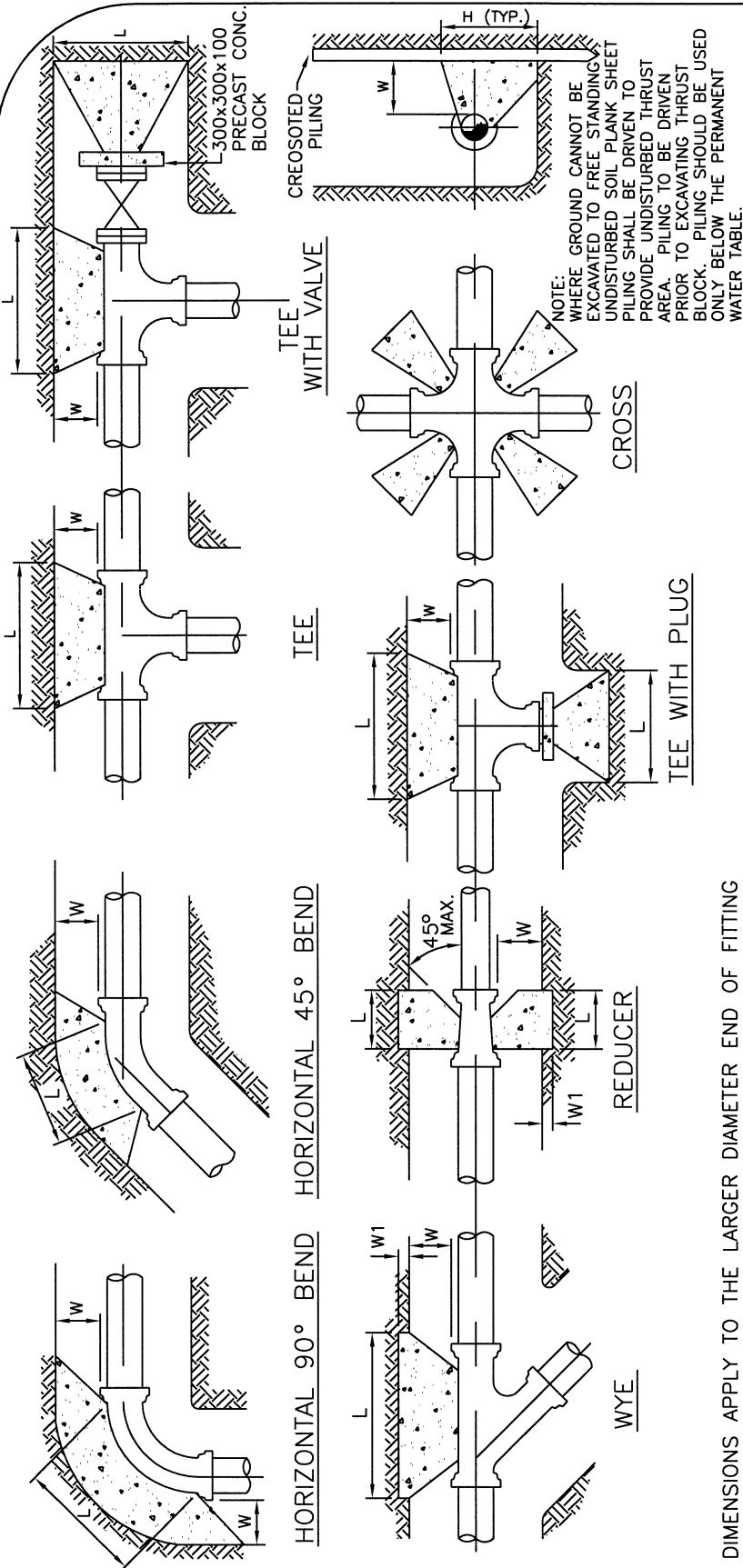


- W-1 Thrust Block Details
- W-2 Hydrant Connection Details
- W-3 Air Valve
- W-4 Flush Valve Assembly
- W-5 Cast Iron Water Valve Box
- W-6 19 mm and 25 mm Residential Water Service
- W-7 39 mm and 50 mm Water Service
- W-8 Classes of Pipe Bedding
- W-9 19 mm and 25 mm Meter Installation
- W-10 38 mm and 50 mm Meter Installation

END OF SECTION

THRUST BLOCK DETAILS



DIMENSIONS APPLY TO THE LARGER DIAMETER END OF FITTING

MINIMUM THRUST AREAS FOR FITTINGS AT 1030 kN/m² PRESSURE AND FOR SOILS WITH A MINIMUM BEARING OF 96kN/m² (NOT TO BE USED FOR SOFT CLAY, MUCK, PEAT, ETC.)

TYPE OF FITTING	FITTING SIZE "D" (mm)	OUTSIDE OF FITTING TO BEARING FACE "W" (mm)	RECESS IN TRENCH WALL "W1" (mm)	LENGTH "L" (mm)	HEIGHT "H" (mm)	TYPE OF FITTING	FITTING SIZE "D" (mm)	OUTSIDE OF FITTING TO BEARING FACE "W" (mm)	RECESS IN TRENCH WALL "W1" (mm)	RECESS IN TRENCH WALL "W1" (mm)	LENGTH "L" (mm)	HEIGHT "H" (mm)
90° BEND	150	300		900	450	CROSS	150	300			600	450
	200	350		1050	600		200	350			750	600
	250	375		1425	750		250	375			975	750
	300	400		1625	900		300	400			1200	900
45° BEND	150	300		450	450	45° WYE	150	300			450	450
	200	350		600	600		200	350			600	600
	250	375		750	750		250	375			750	750
	300	400		900	900		300	400			900	900
22 1/2° BEND	150	300		450	225	REDUCER	150	300			450	450
	200	350		600	300		200	350			600	600
	250	375		825	375		250	375			750	750
	300	400		900	450		300	400			900	900
TEE	150	300		600	450	CAPS AND PLUGS (IF NOT BOLTED)	150	300			450	450
	200	350		750	600		200	350			600	600
	250	375		975	750		250	375			750	750
	300	400		1200	900		300	400			900	900



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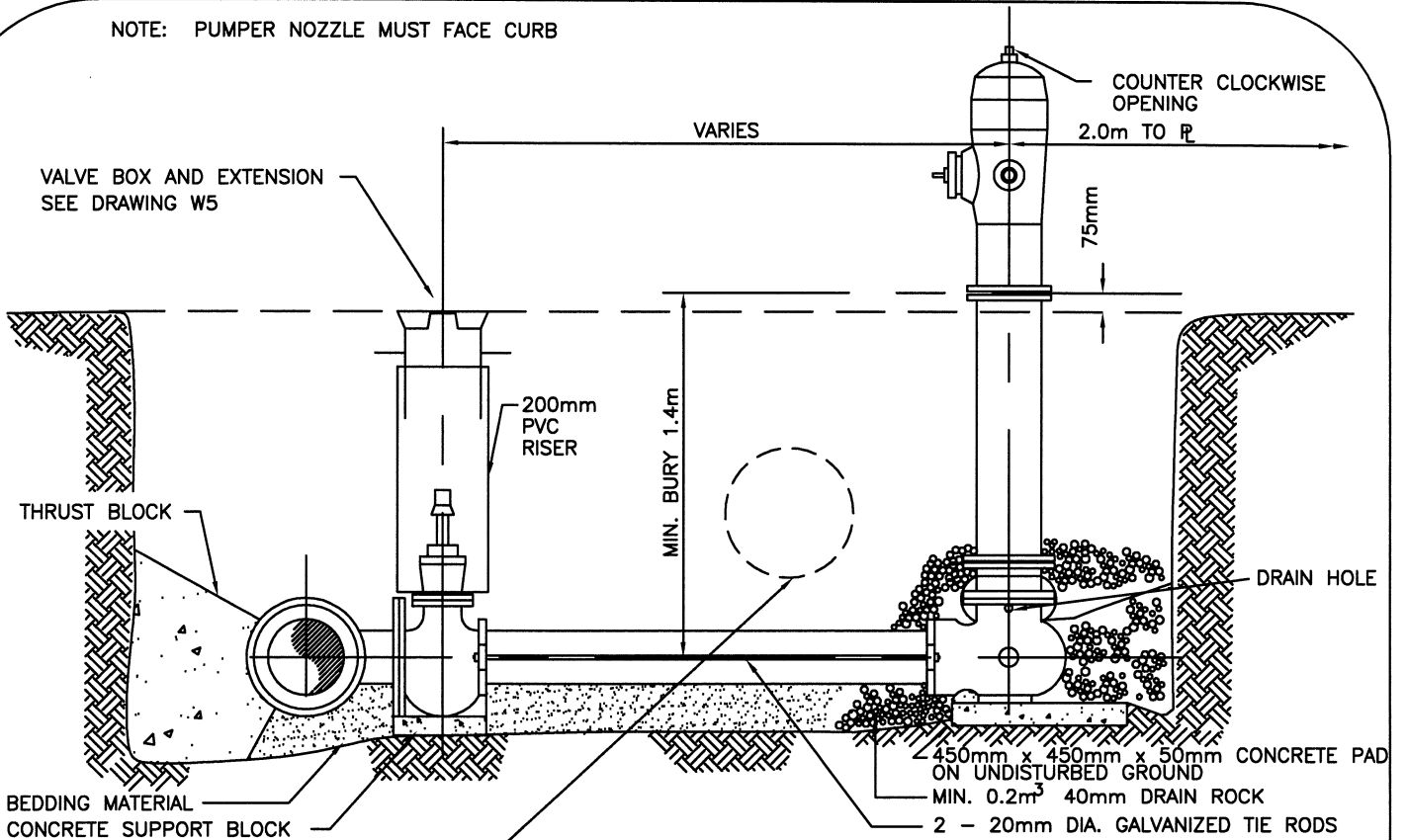
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REVISION:

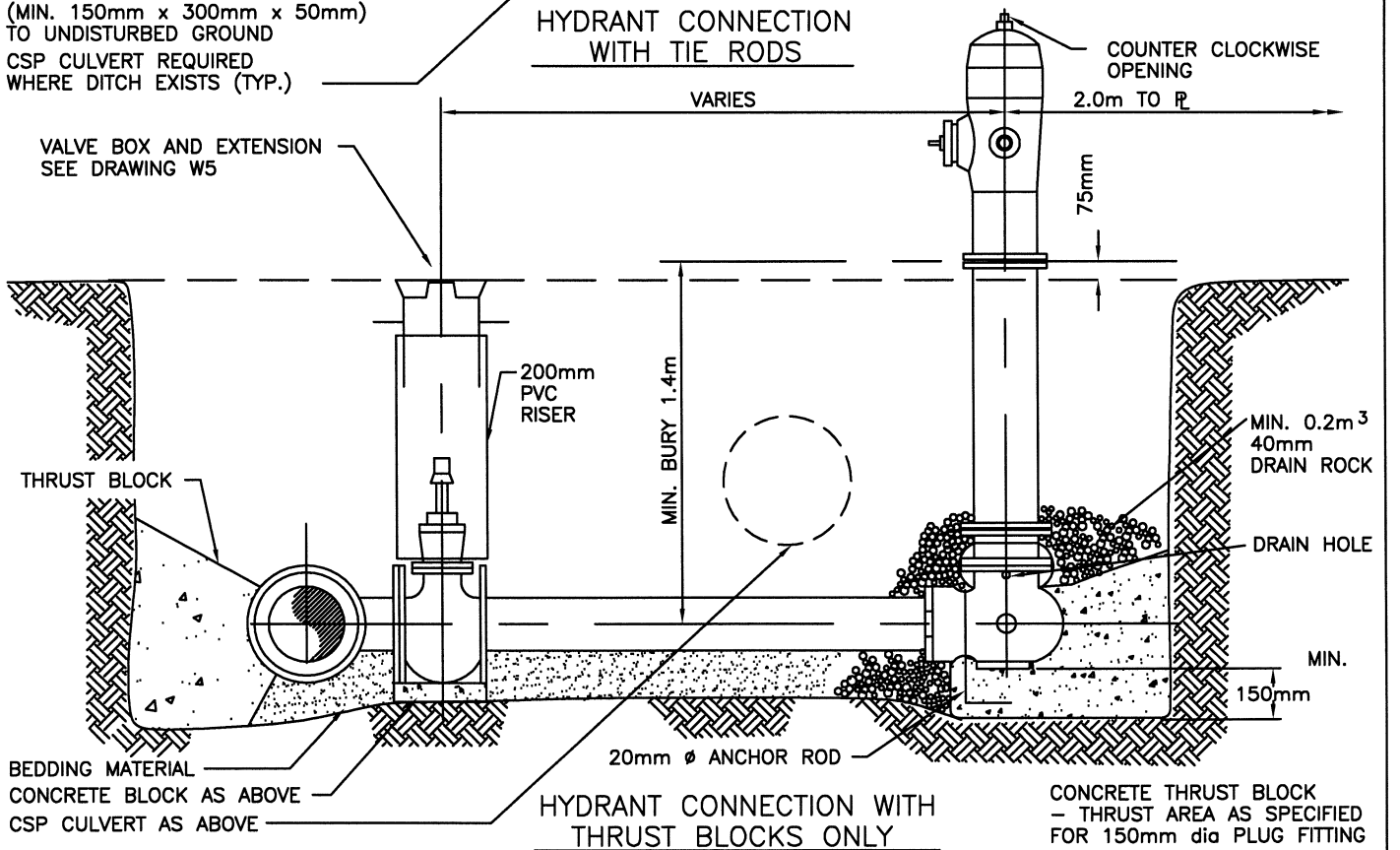
APPROVED:

W 1

NOTE: PUMPER NOZZLE MUST FACE CURB



HYDRANT CONNECTION WITH TIE RODS



HYDRANT CONNECTION WITH THRUST BLOCKS ONLY

HYDRANT CONNECTION DETAILS



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ENGINEERING DEPARTMENT

DATE:
MAY 15, 1996

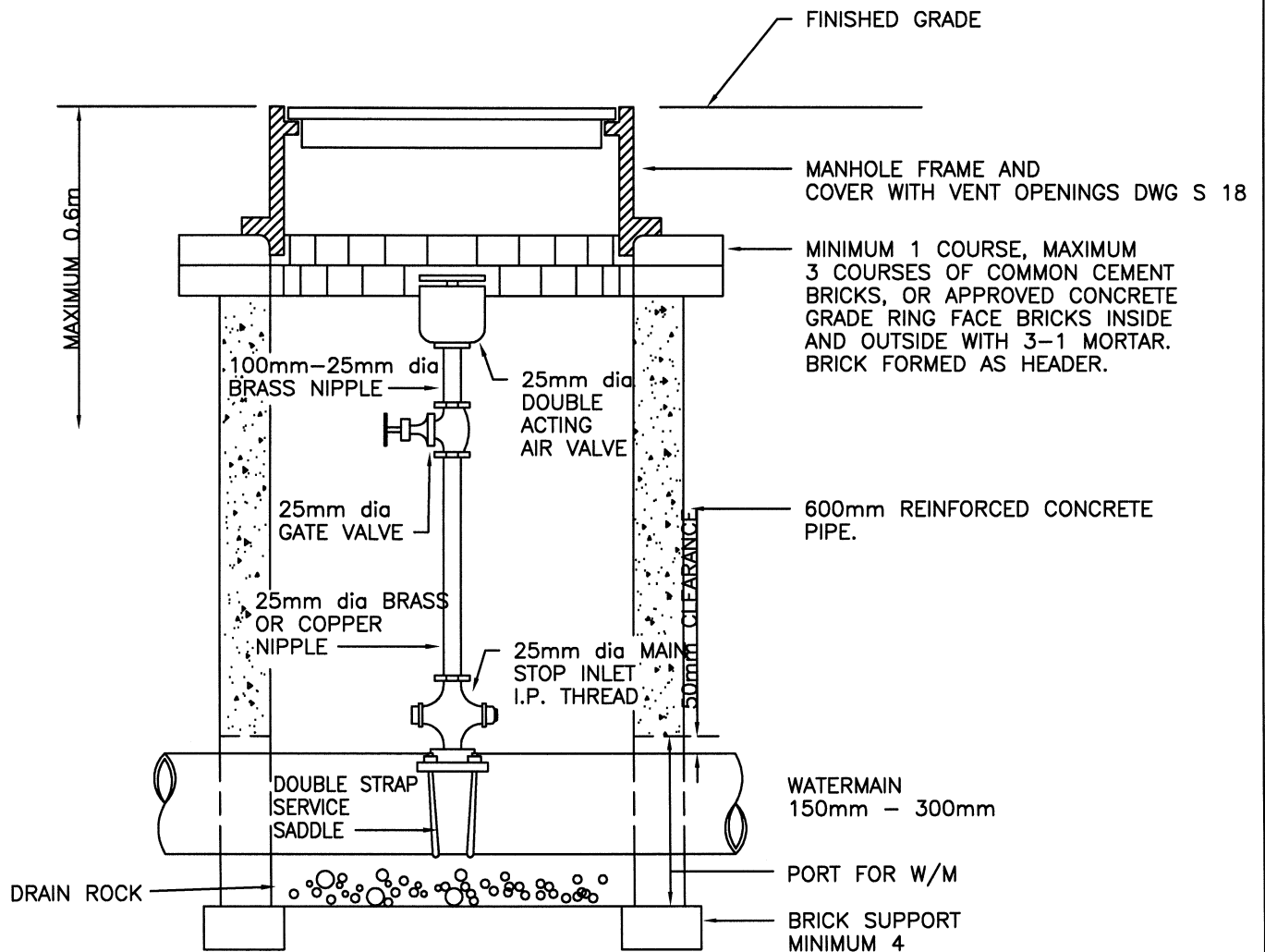
REVISION:

1

APPROVED:

Law

W 2



NOTES

1. CONSULT WITH ENGINEERING DEPARTMENT WHEN WATERMAIN DIAMETER IS GREATER THAN 300mm dia.
2. WHERE POSSIBLE 100mm DRAIN TO BE PROVIDED. DRAINLINE TO BE EQUIPPED WITH BACKWATER VALVE OR DISCHARGE TO GROUND SURFACE.

AIR VALVE

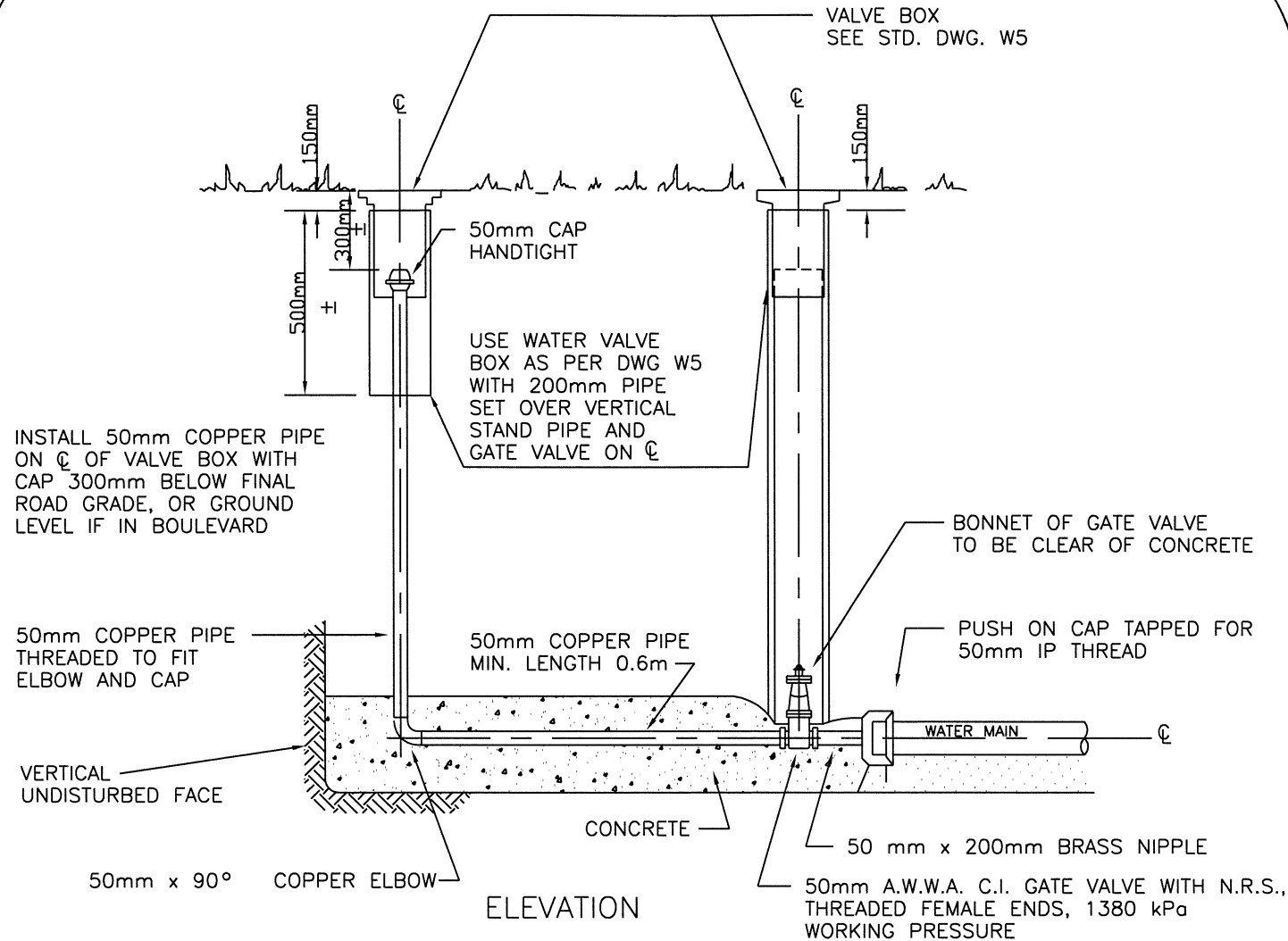


CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE:
MAY 15, 1996

REVISION:
1
APPROVED

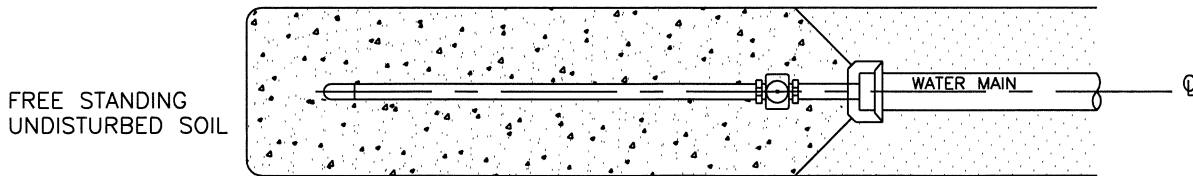
W 3



ELEVATION

NOTES

-CONCRETE USED FOR BLOCKING TO HAVE MINIMUM 20 MPa COMPRESSION STRENGTH AND MUST BE ALLOWED TO CURE A MINIMUM OF 48 HOURS BEFORE WATERMANS ARE CHARGED.



PLAN VIEW

FLUSH VALVE ASSEMBLY



CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

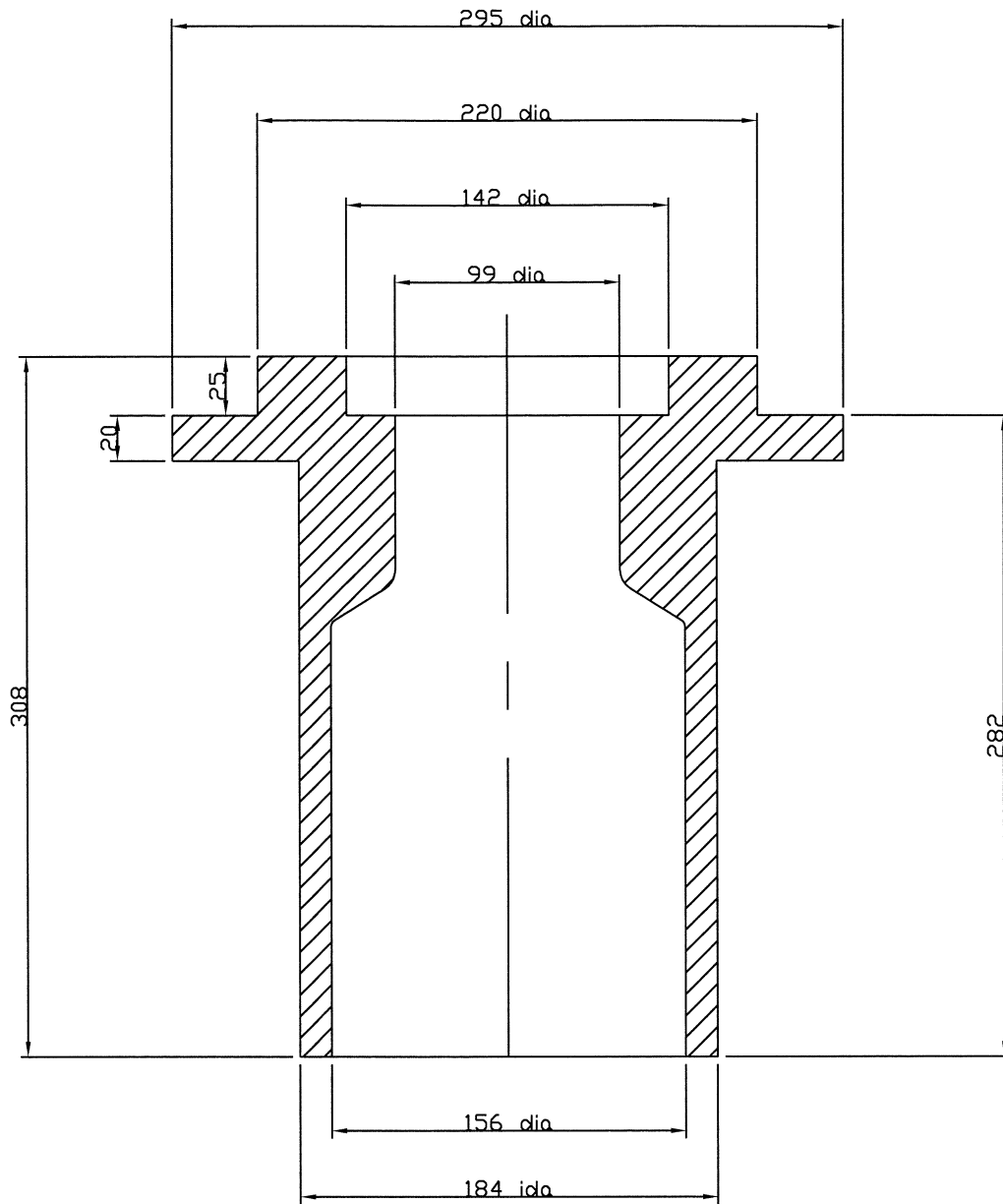
DATE:
DEC. 14, 2001

REVISION:

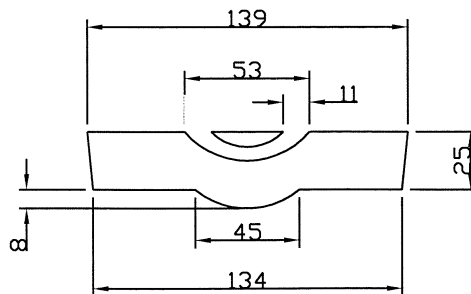
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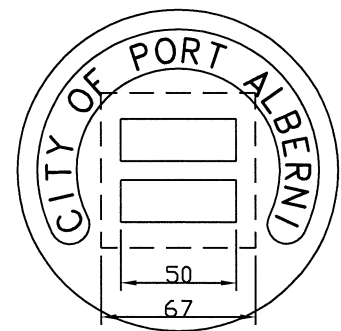
W 4



VALVE BOX



VALVE BOX LID



CAST IRON

WATER VALVE BOX



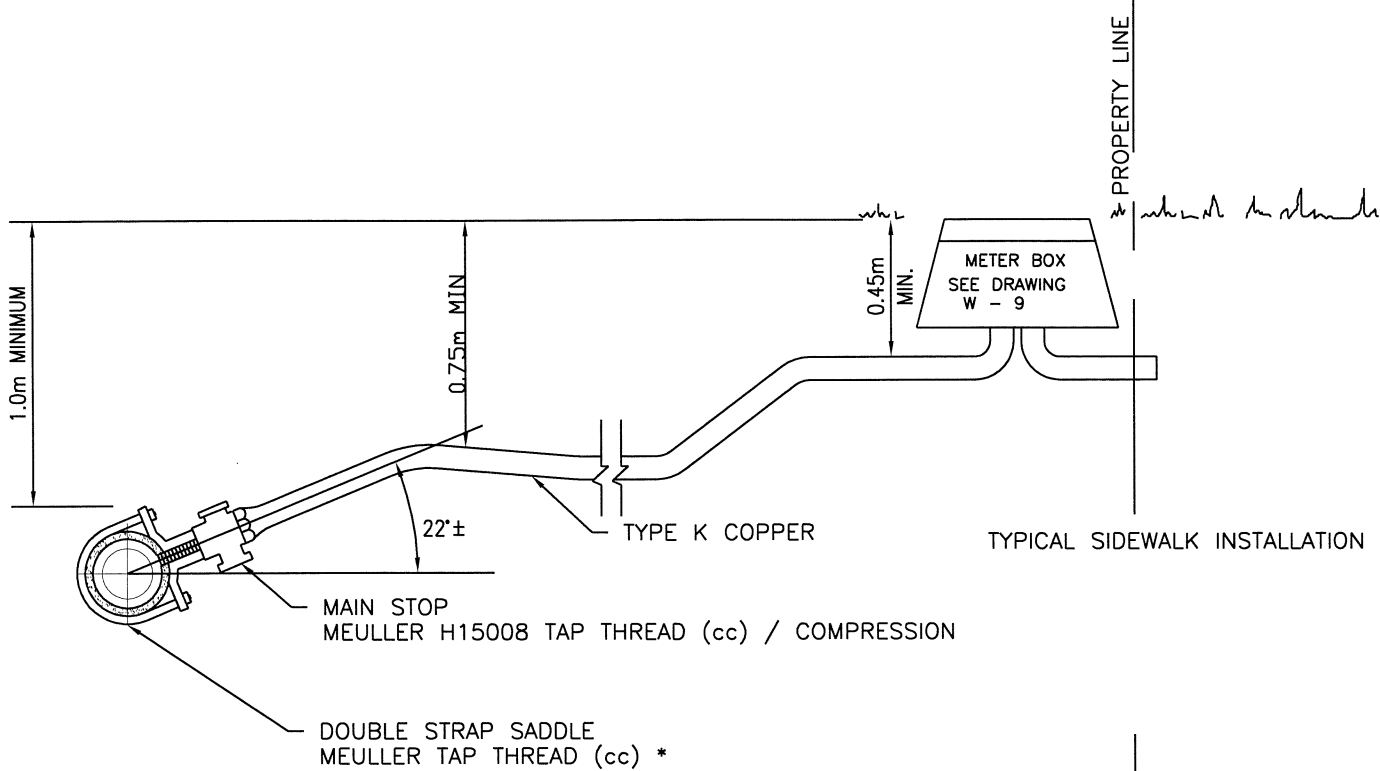
CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE: Dec 13/93

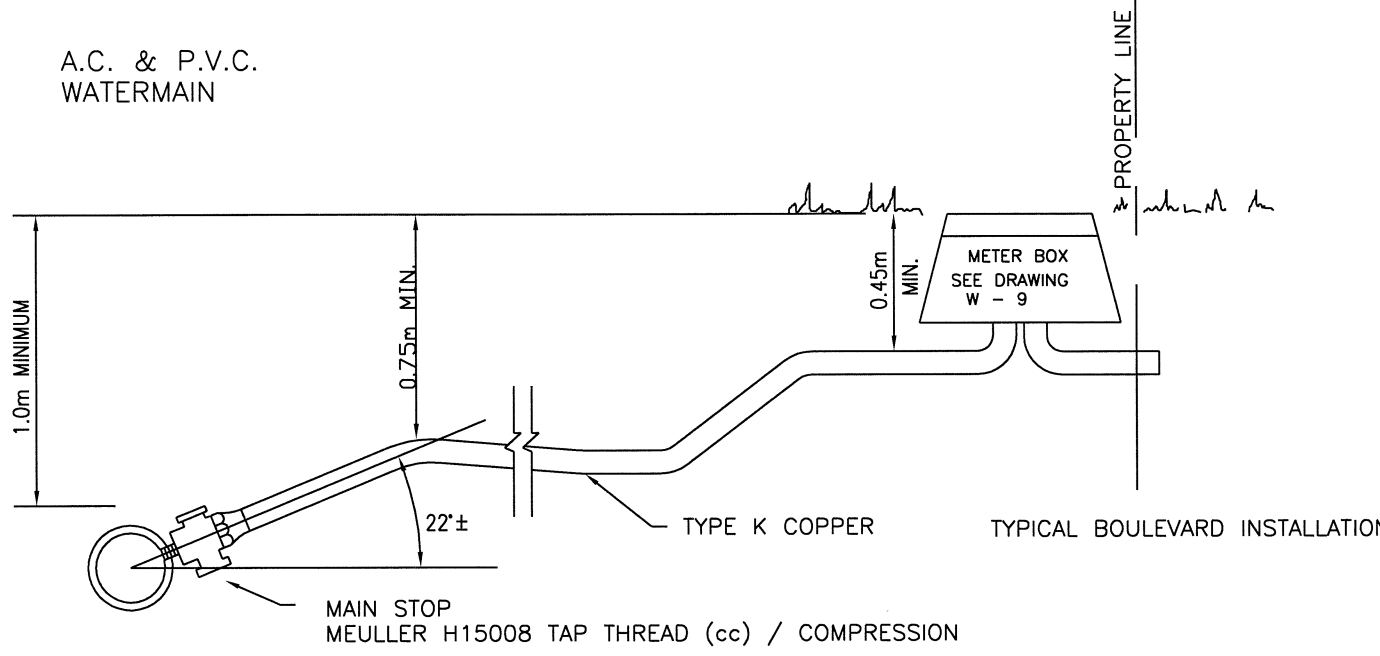
REVISION: A

APPROVED: [Signature]

W 5



A.C. & P.V.C.
WATERMAIN



C.I. & D.I.
WATERMAIN

* OR APPROVED EQUIVALENT

19mm AND 25mm
RESIDENTIAL
WATER SERVICE



CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE:
MAY 15, 1996

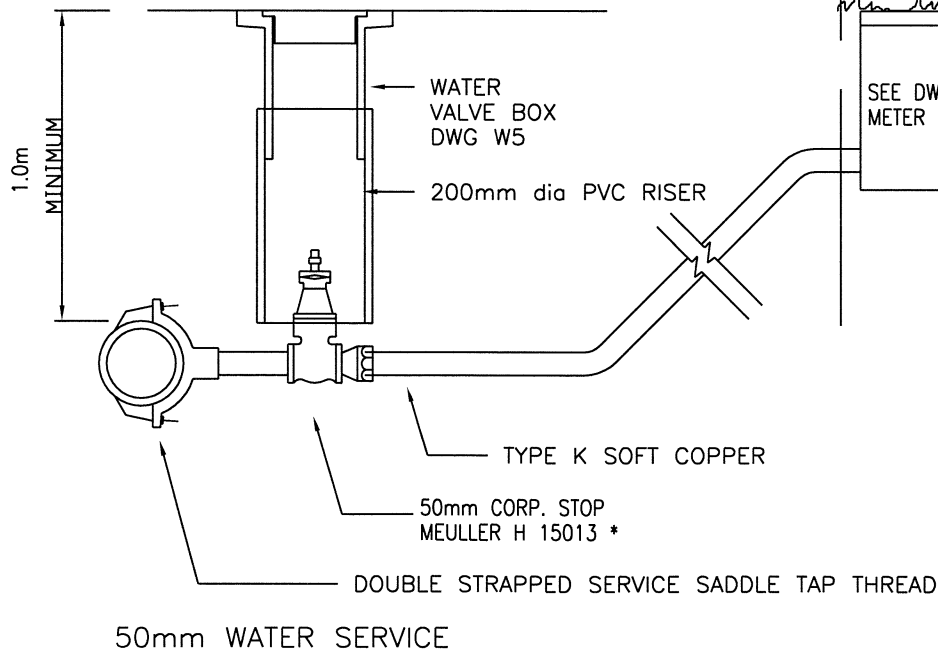
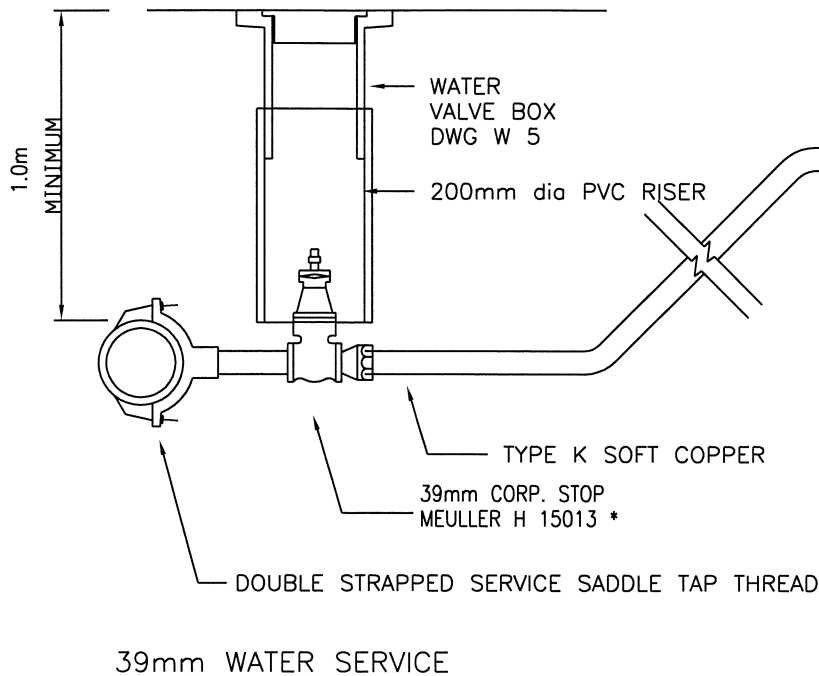
REVISION:

APPROVED:

2
[Signature]

W 6

NOTE:
 IN NEW COMMERCIAL AND MULTI FAMILY RESIDENTIAL
 DEVELOPMENTS METERS SHALL BE LOCATED INSIDE
 THE BUILDING IN A LOCATION ACCESSIBLE TO METER READER.
 UNLESS OTHERWISE APPROVED BY THE ENGINEER.



NOTE

USE CLASS 'B' BEDDING

* OR APPROVED EQUIVALENT

39mm AND 50mm
 WATER SERVICE



CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

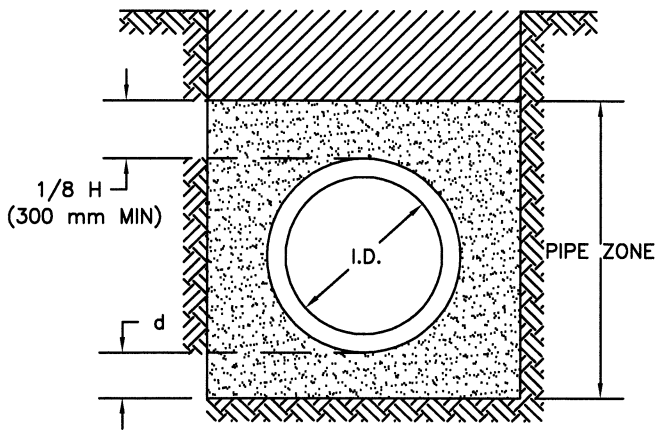
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 AUG. 20, 1996

REVISION:

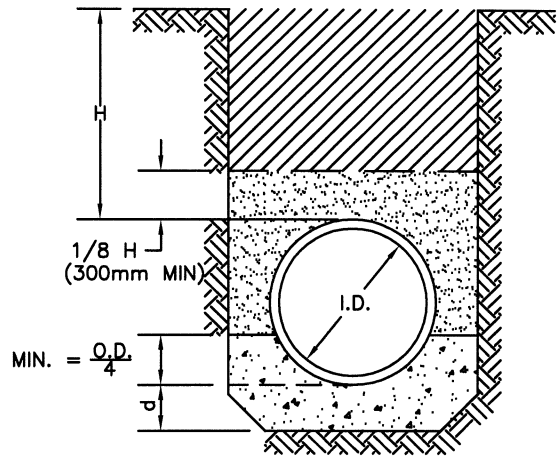
APPROVED:

2

W 7



CLASS B
FIRST CLASS BEDDING
LOAD FACTOR 1.9



CLASS A
CONCRETE CRADLE
LOAD FACTOR 2.8

DEPTH OF BEDDING MATERIAL BELOW PIPE

I.D.	d (MIN)
≤ 675mm	75mm
750mm – 1500mm	100mm
> 1500mm	150mm

MINIMUM COVER OVER TOP OF PIPE – 1.0m



CONCRETE
28 DAY STRENGTH TO BE 20MPa OR MORE



PIT-RUN GRAVEL (MINUS 25mm) OR SAND
IN LAYERS NOT OVER 150mm & COMPACTED

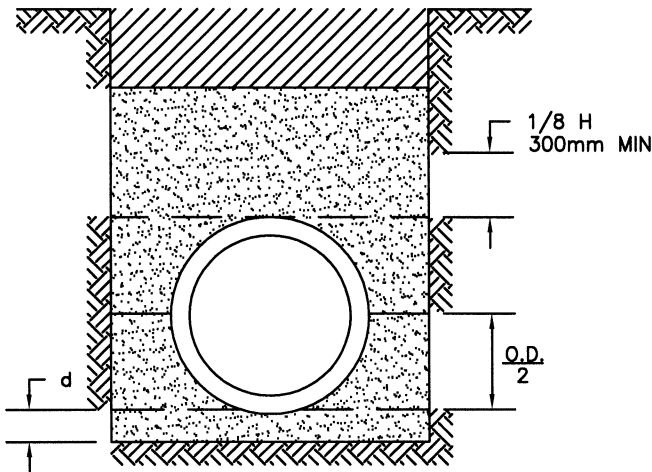


MACHINE PLACED BACKFILL
FREE FROM DEBRIS, LARGE LUMPS OR STONES OVER 150mm SIZE.

O.D. – OUTSIDE DIAMETER

I.D. – INSIDE DIAMETER

H – DISTANCE FROM GROUND TO TOP OF PIPE



CLASS C
ORDINARY BEDDING
LOAD FACTOR 1.5

NOTES:

- FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVER-EXCAVATED A MIN. OF 150mm FROM THE OUTSIDE COUPLINGS OR BELLS OF THE PIPES & REFILLED WITH GRANULAR MATERIAL. (MAX. AGGREGATE SIZE – 25mm)
- FOR PVC PIPE; BEDDING TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- THIS DRAWING INDICATES MINIMUM SPECIFICATIONS. MANUFACTURERS RECOMMENDED BEDDING AND BACKFILLING SHALL GOVERN WHERE THEY EXCEED THIS SPECIFICATION.
- SEE STANDARD DRAWINGS T1, T2, T3 FOR BACKFILL DETAILS ABOVE PIPE ZONE.

CLASSES OF PIPE BEDDING



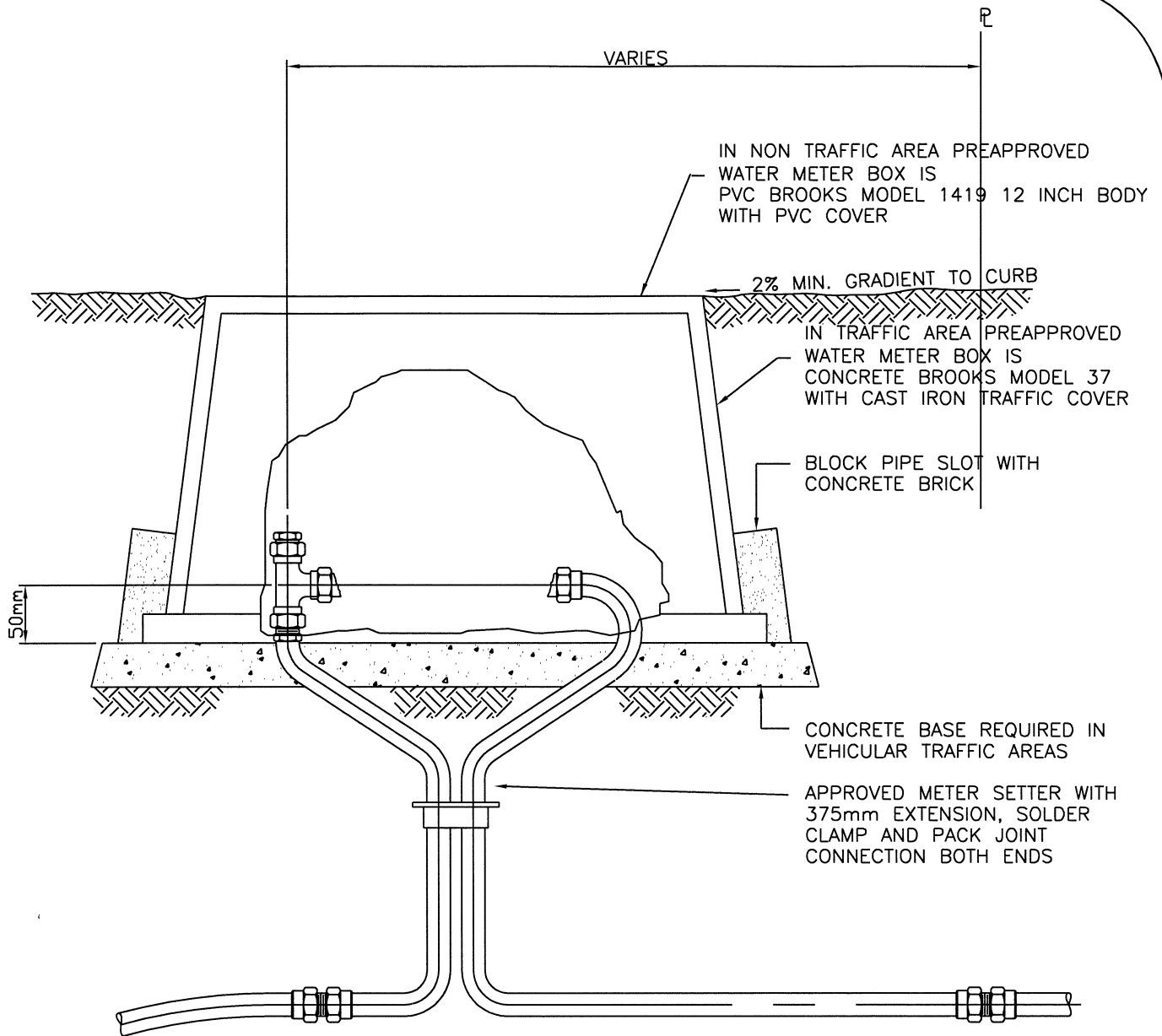
CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE:
DEC. 14, 2001

REVISION:
1

APPROVED:

W 8



NOTES:

1. FOR 50mm dia SERVICE SEE STANDARD DWG W 10
2. METER TO BE INSTALLED BY THE CITY OF PORT ALBERNI.
3. METER SETTERS TO BE EQUIPPED WITH LOCKABLE INLET VALVE, SINGLE CHECK OUTLET VALVE, AND SOLDER CLAMP AND PACK JOINT CONNECTION BOTH ENDS.
4. FOR 20mm CONNECTIONS PREAPPROVED METER SETTERS ARE FORD VH92-15 OR FORD VH82.
5. FOR 25mm CONNECTIONS PREAPPROVED METER SETTERS ARE FORD VH94-15 OR FORD VH84.

20mm AND 25mm DIA.

METER INSTALLATION



**CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT**

DATE:
1995-04-07

REVISION:

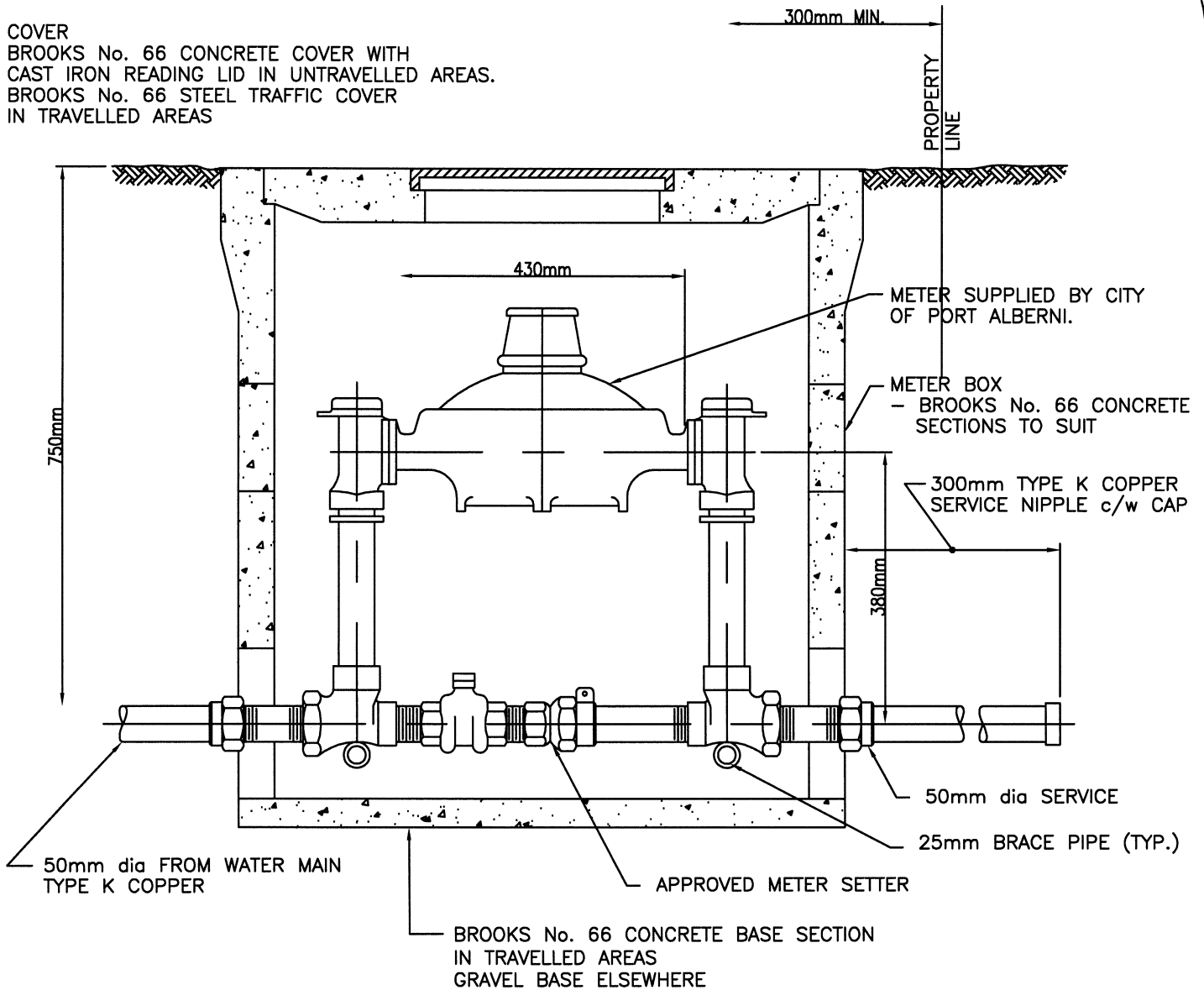
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W 9

COVER
 BROOKS No. 66 CONCRETE COVER WITH
 CAST IRON READING LID IN UNTRAVELLED AREAS.
 BROOKS No. 66 STEEL TRAFFIC COVER
 IN TRAVELLED AREAS



NOTES:

1. METER TO BE INSTALLED BY THE CITY OF PORT ALBERNI.
2. METER SETTERS TO BE FOR FLANGED METERS AND EQUIPPED WITH BYPASS, LOCKABLE INLET VALVE, LOCKABLE BYPASS VALVE, AND CHECK VALVE OUTLET.
3. FOR 38mm CONNECTIONS PREAPPROVED METER SETTER IS FORD VFH66-15Bx13.
4. FOR 50mm CONNECTIONS PREAPPROVED METER SETTER IS FORD VFH77-15Bx17.

38mm AND 50mm OUTSIDE

METER INSTALLATION



CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE: MAY 15, 1996

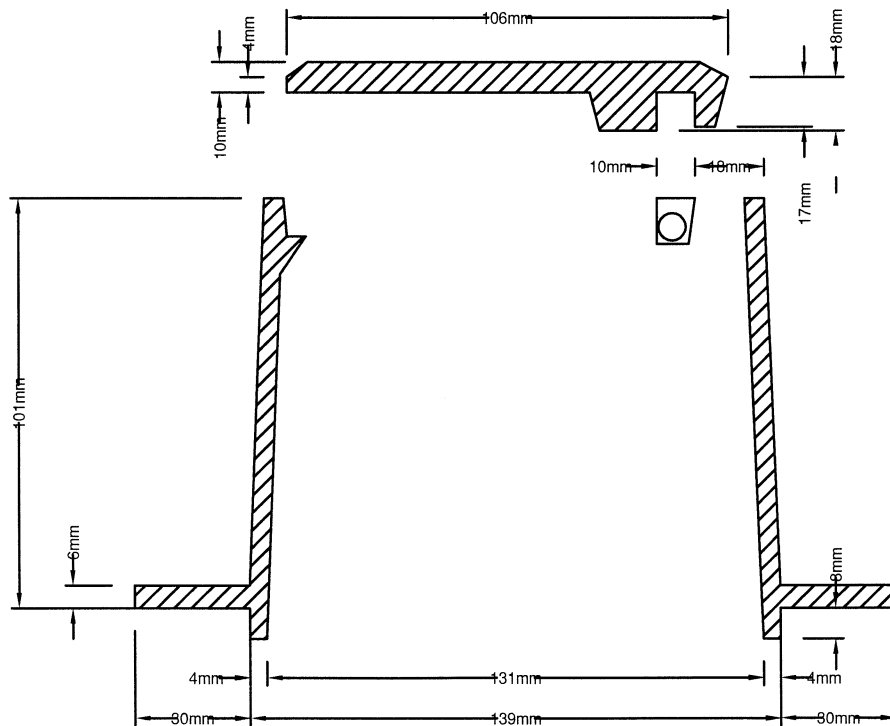
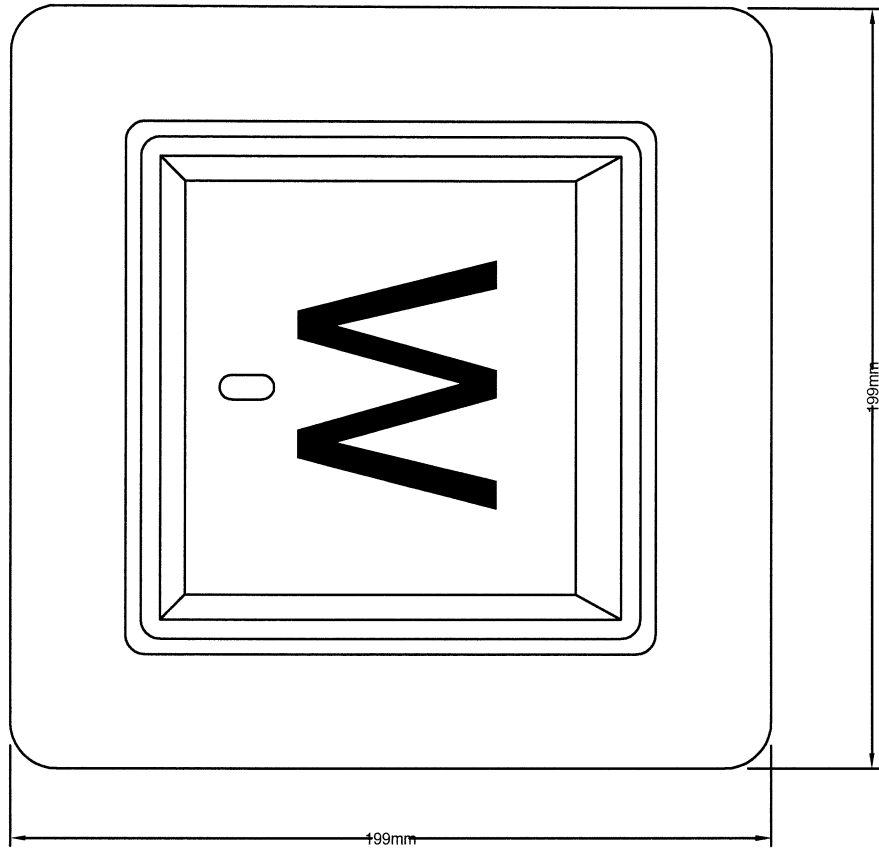
REVISION:

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W 10



WATER CONNECTION SHUT-OFF TOP
IN CONCRETE OR ASPHALT SURFACE
(ALBERNI FOUNDRY)



CITY OF PORT ALBERNI
ENGINEERING DEPARTMENT

DATE:
Dec 14, 2001

REVISION:

APPROVED:

W 11