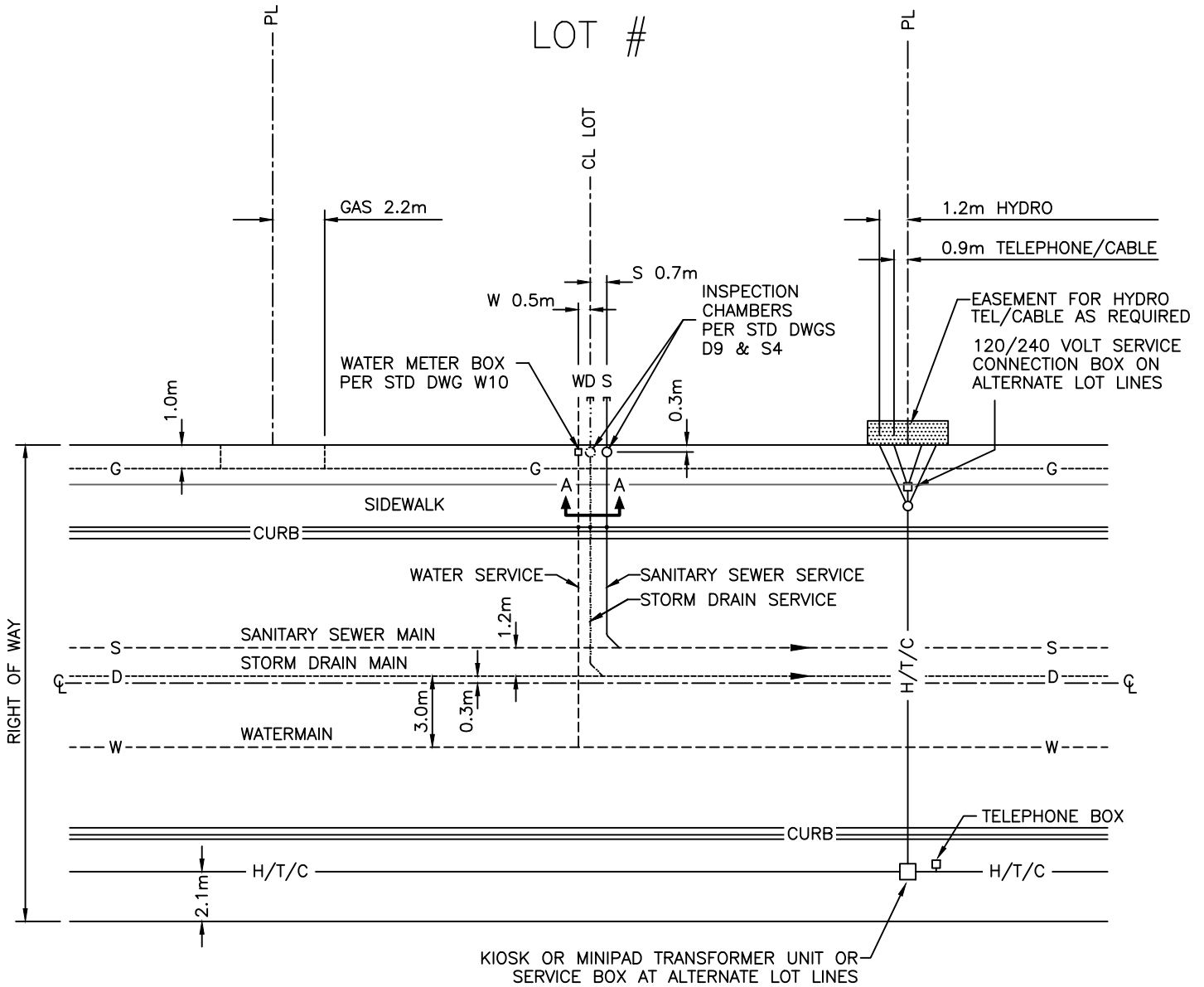
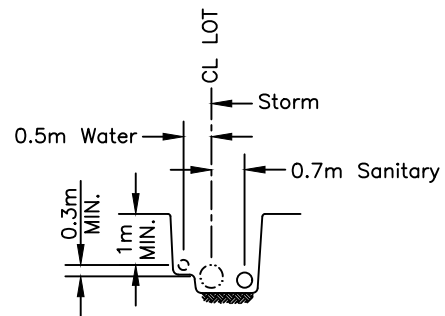


LOT #



NOTE:

1. WHERE IT IS NECESSARY FOR CITY SERVICES TO BE LOCATED ON THE LOWER SIDE OF THE LOT (E.G. WHERE SIDE LOT GRADES ARE STEEP, SEWERS ARE SHALLOW, OR MBE'S ARE TOO HIGH, ETC.), NON-CITY SERVICES (H/T/C/G) MUST BE LOCATED ON THE OPPOSITE SIDE OF THE LOT. THIS MAY REQUIRE ADDITIONAL SERVICES BOXES.
2. WHERE SANITARY SEWERS AND STORM DRAINS ARE INSTALLED IN A COMMON TRENCH, THERE SHALL BE A MINIMUM 300 mm LATERAL CLEARANCE BETWEEN THE WALLS OF THE PIPES AND TRENCH WALLS.
3. MINIMUM 0.3m CLEARANCE FROM GAS MAIN TO STREETLIGHT DUCT

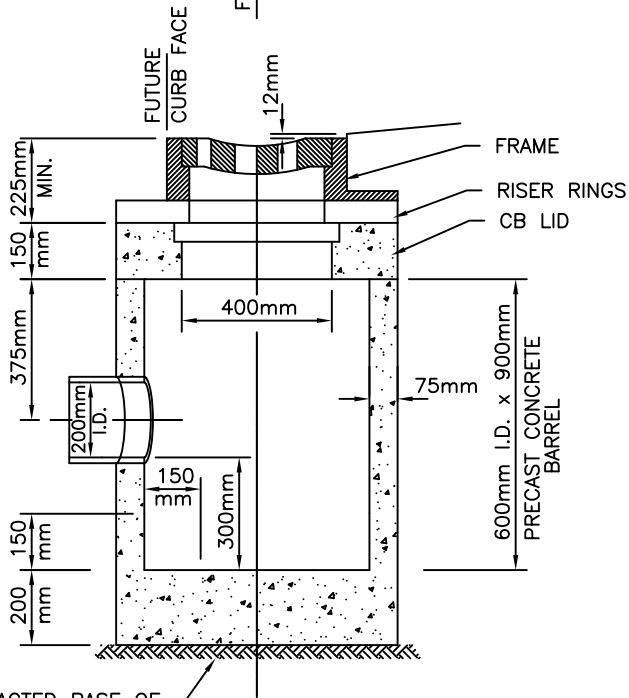
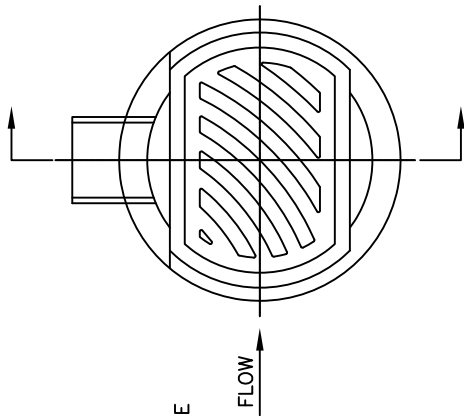
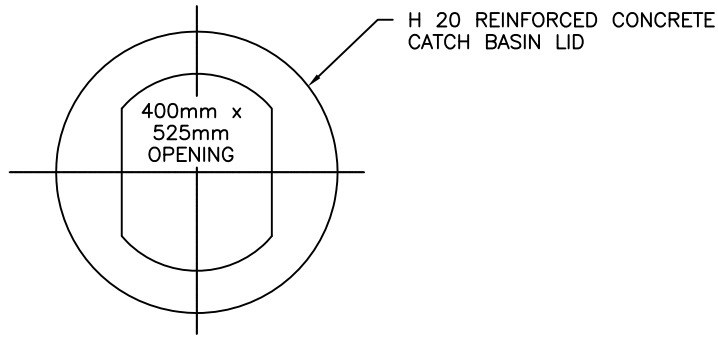


SECTION A-A
SHOWING CONNECTIONS

City of
Parksville

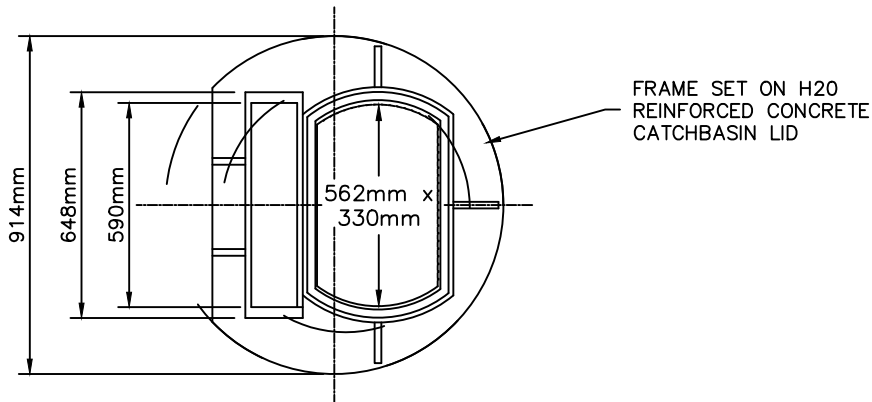
TYPICAL LOCATION OF SERVICE
CONNECTIONS TO
RESIDENTIAL VACANT LOTS

Scale	N.T.S.
Drawn	GC
Date:	NOV 2017
Dwg. No.	D1

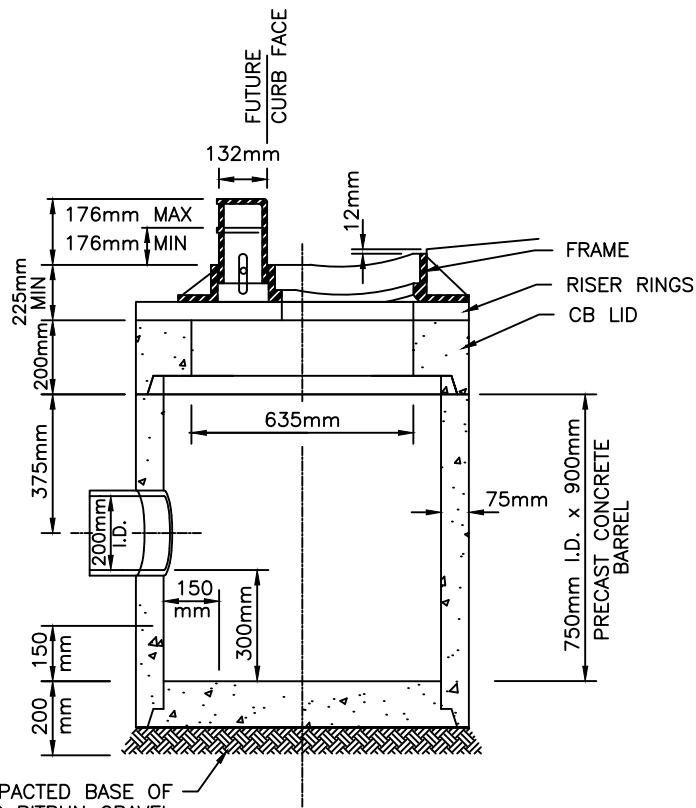


NOTES:

1. GRATE – DOBNEY B-23 OR EQUIV.
FRAME – DOBNEY B-24D OR EQUIV.
2. MAX. 3, MIN. 1 COURSE OF BRICK OR PRECAST CONCRETE RISER RINGS LAID IN PORTLAND CEMENT MORTAR.
3. PRECAST CONCRETE LID REINFORCED TO H20 HIGHWAY LOADING.
4. ALL JOINTS TO BE PRE-WETTED BEFORE MORTAR IS PLACED.
5. THE GRATING TO BE PLACED 12mm BELOW FINISHED PAVING IF CURB AND GUTTER IS TO BE CONSTRUCTED, CATCH BASIN CASTINGS ARE TO BE LEFT LOOSE UNTIL AFTER THE CURBING OPERATION HAS BEEN COMPLETED.
6. BASE OF GRANULAR MATERIAL, CLASS C COMPACTED TO 95% MODIFIED PROCTOR.
7. MORTAR SHALL COMPLY TO ASTM C-270-68 OR LATEST REVISION.
8. PRECAST REINFORCED SPUN CONCRETE SECTIONS SHALL CONFORM TO ASTM C-478-82.
9. PRECAST REINFORCED RISER RINGS TO CONFORM TO ASTM C-478-82 OR LATEST REVISION.
10. TRIM OUTLET PIPING FLUSH WITH INSIDE OF BARREL.



FRAME SET ON H20
REINFORCED CONCRETE
CATCHBASIN LID



150mm COMPACTED BASE OF
75mm MINUS PITRUN GRAVEL

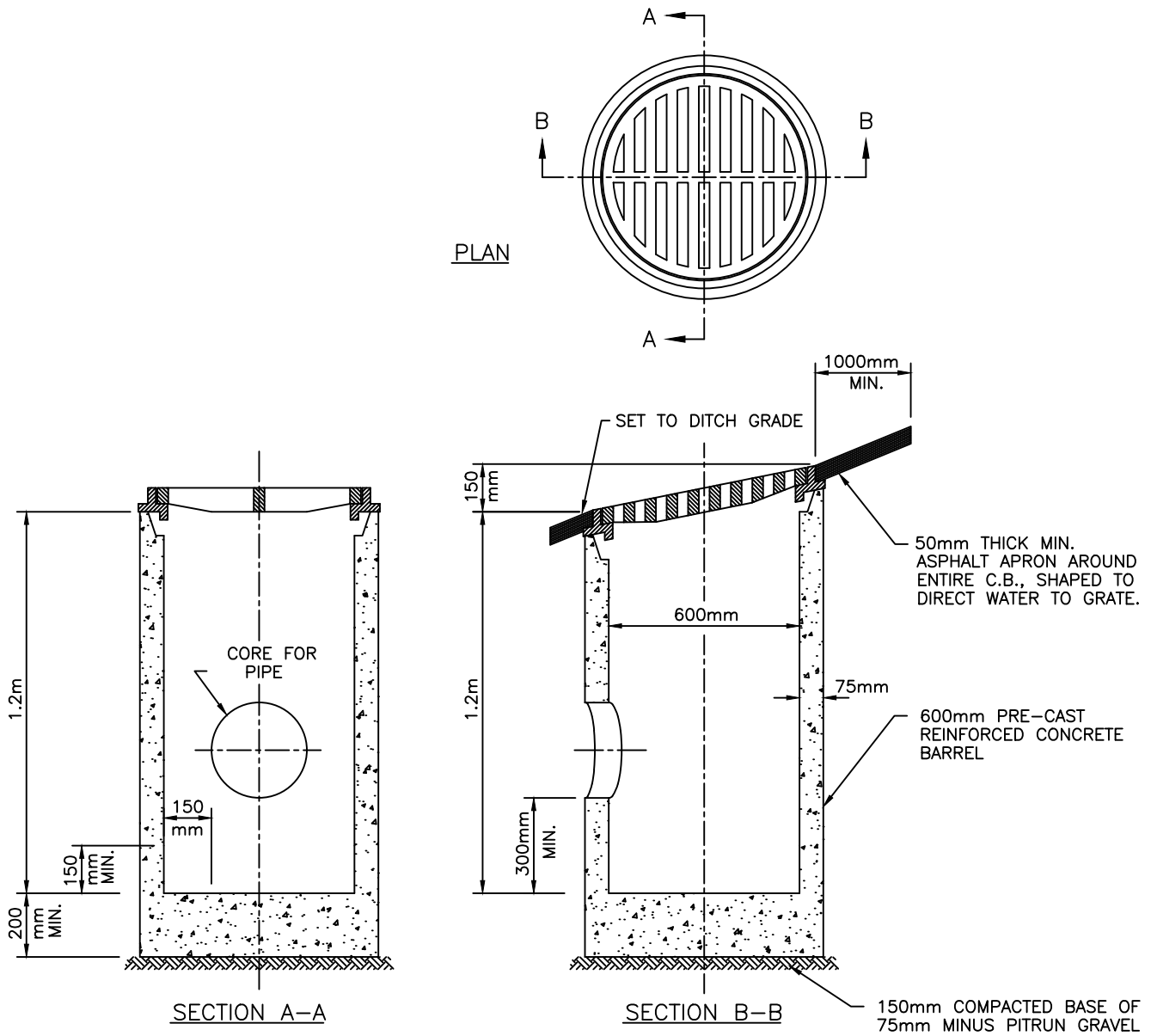
NOTES:

1. GRATE - DOBNEY B-23 OR EQUIV.
FRAME - DOBNEY B-24 ADJ OR EQUIV.
2. MAX. 3, MIN. 1 COURSE OF BRICK OR
PRECAST CONCRETE RISER RINGS LAID IN
PORTLAND CEMENT MORTAR.
3. PRECAST CONCRETE LID REINFORCED TO
H20 HIGHWAY LOADING.
4. ALL JOINTS TO BE PRE-WETTED BEFORE
MORTAR IS PLACED.
5. THE GRATING TO BE PLACED 12mm BELOW
FINISHED PAVING IF CURB AND GUTTER IS
TO BE CONSTRUCTED, CATCH BASIN
CASTINGS ARE TO BE LEFT LOOSE UNTIL
AFTER THE CURBING OPERATION HAS BEEN
COMPLETED.
6. BASE OF GRANULAR MATERIAL, CLASS C
COMPACTED TO 95% MODIFIED PROCTOR.
7. MORTAR SHALL COMPLY TO ASTM
C-270-68 OR LATEST REVISION.
8. PRECAST REINFORCED SPUN CONCRETE
SECTIONS SHALL CONFORM TO ASTM
C-478-82.
9. PRECAST REINFORCED RISER RINGS TO
CONFORM TO ASTM C-478-82 OR LATEST
REVISION.
10. TRIM OUTLET PIPING FLUSH WITH INSIDE OF
BARREL.

City of
Parksville

CATCHBASIN TYPE 2
ADJUSTABLE SIDE INLET

Scale	N.T.S.
Drawn	G.C.
Date:	OCT 2017
Dwg. No.	D3



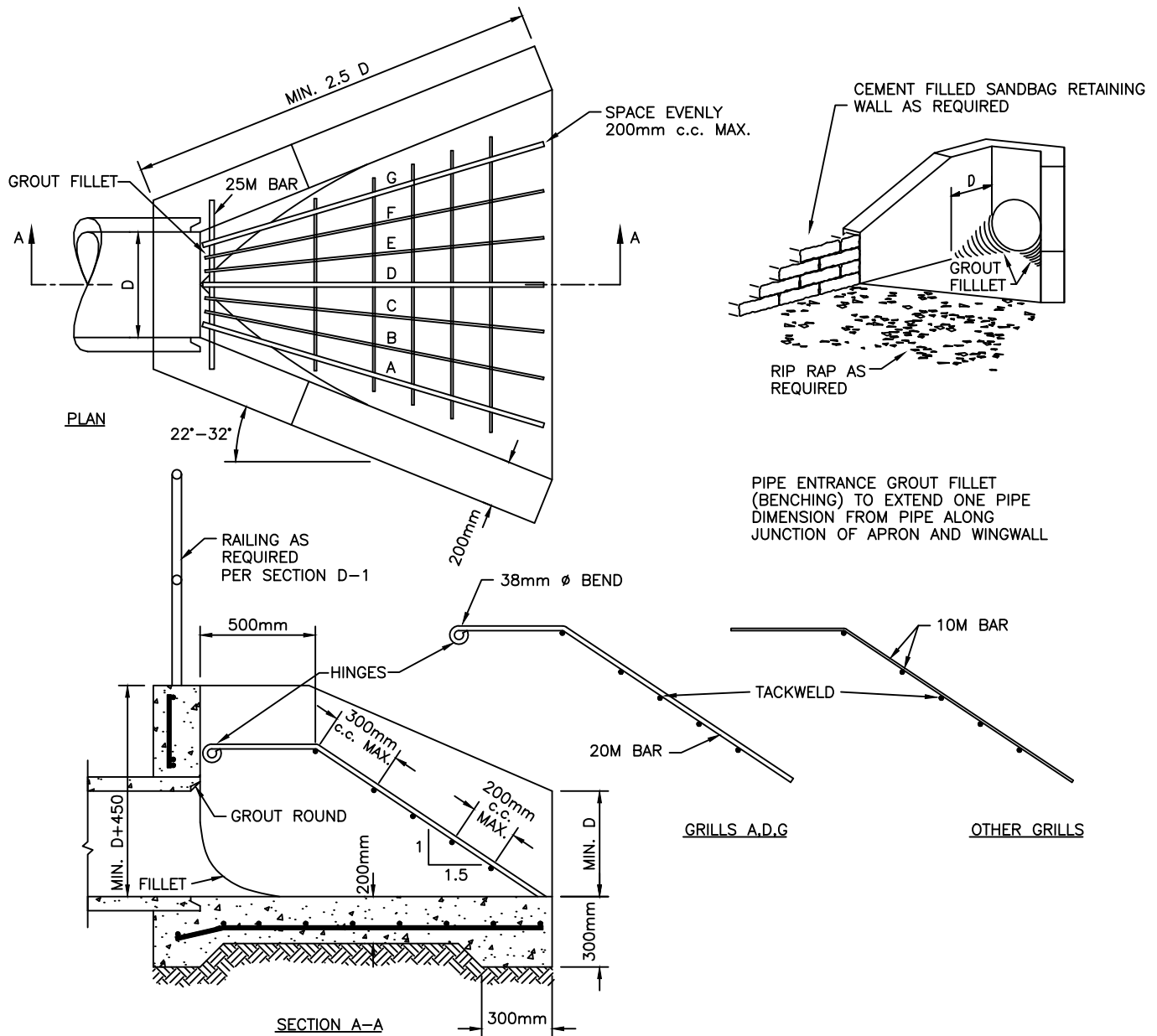
NOTES:

1. THIS DITCH INLET TYPE TO BE USED FOR CONNECTIONS TO STORM SEWERS.
2. INLET GRATE TO BE DOBNEY FOUNDARY No. B-26 B OR EQUIVALENT.
3. FOR DITCHES WITH GRADES LESS THAN 5%, GRATE TO BE SET LEVEL. FOR DITCHES WITH GRADES OVER 5%, GRATE TO BE SET RAISED ON DOWNSTREAM SIDE AS SHOWN.
4. ALL JOINTS TO BE PRE-WETTED BEFORE MORTAR IS PLACED.
5. BASE OF GRANULAR MATERIAL, CLASS C COMPACTED TO 95% MODIFIED PROCTOR.
6. MORTAR SHALL COMPLY TO ASTM C-270-68 OR LATEST REVISION.

City of
Parksville

CATCH BASIN FOR
LAWN BASIN OR DITCH
INSTALLATION

Scale	N.T.S.
Drawn	G.G.
Date:	JAN 2017
Dwg. No.	D4



NOTES:

1. REBAR 10M AT 200mm BOTH WAYS AND CENTRED PLUS ONE 10M AROUND PIPE.
2. REBARS TO HAVE MINIMUM 50mm COVER.
3. STRUCTURES – PRECAST OR *POURED IN PLACE. (*CONCRETE TO BE 21MP_a AT 28 DAYS.)
4. CHAMFER ALL EXPOSED CORNERS 25mm.
5. PLACE SUFFICIENT GRANULAR BACKFILL FOR DRAINAGE.
6. CONCRETE THICKNESS AND REBAR DETAIL FOR STRUCTURES HIGHER THAN 2m SHALL BE BY SPECIAL DESIGN.
7. GRILLAGE WILL BE REQUIRED FOR ALL INLETS 375 mm AND GREATER AND OVER 30m IN LENGTH ALL GRILLAGE MATERIALS TO BE GALVANIZED.
8. MINIMUM 100mm GRANULAR BASE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
9. HANDRAILS SHALL BE INSTALLED FOR SAFETY WHERE THE VERTICAL DROP FROM THE TOP OF THE STRUCTURE TO THE INVERT OF THE PIPE IS 1.2m OR GREATER.

City of
Parksville

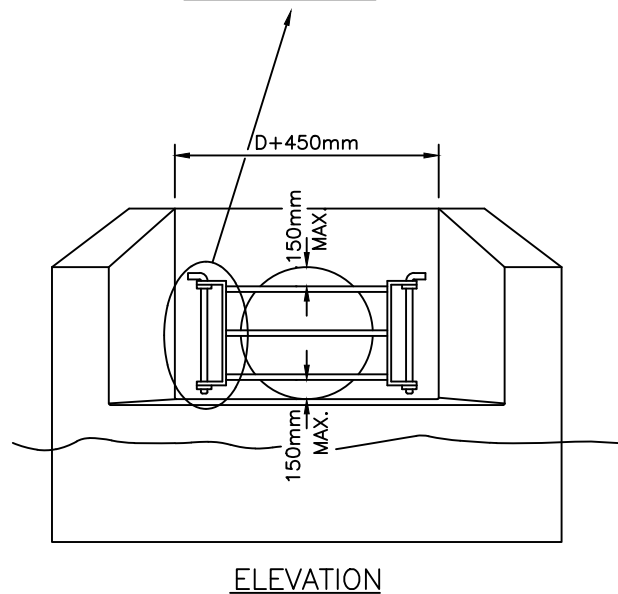
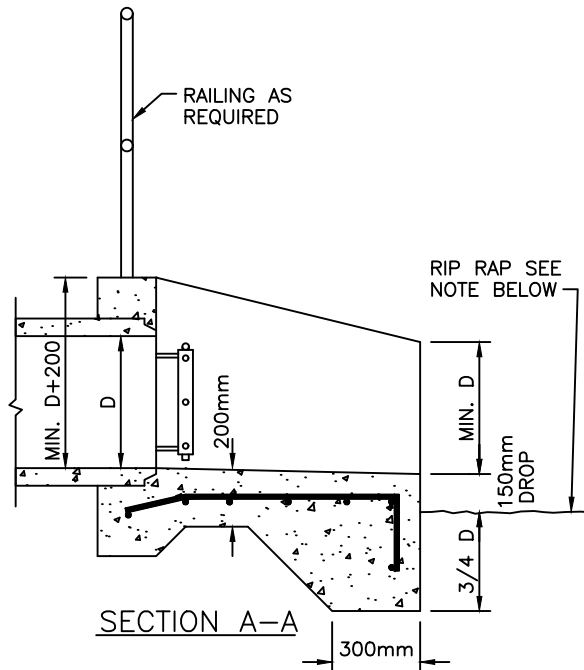
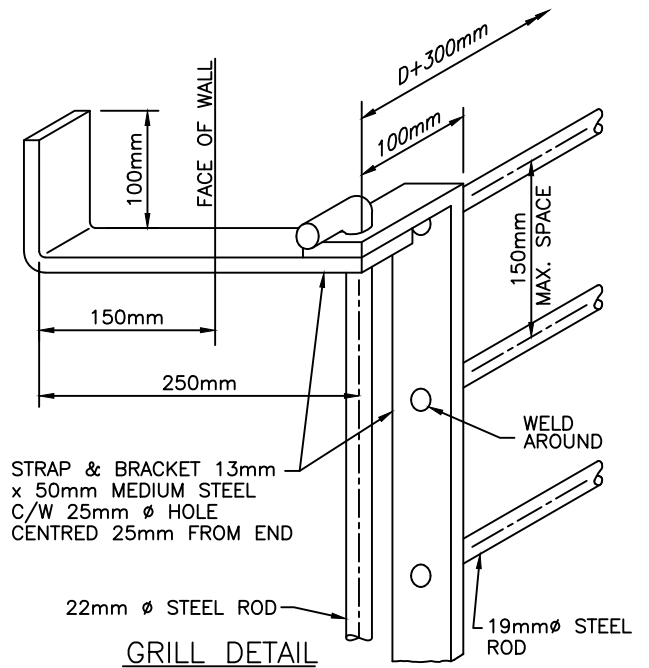
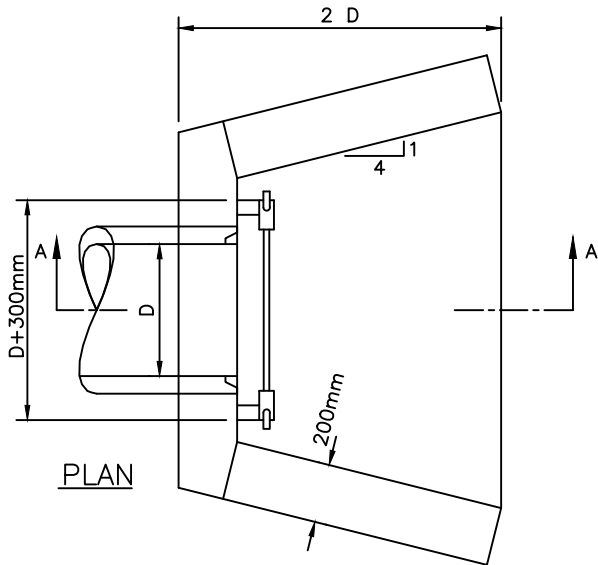
INLET STRUCTURE MAX PIPE
SIZE 1050mm DIA.

Scale N.T.S.

Drawn G.G.

Date: JAN 2017

Dwg. No. D5



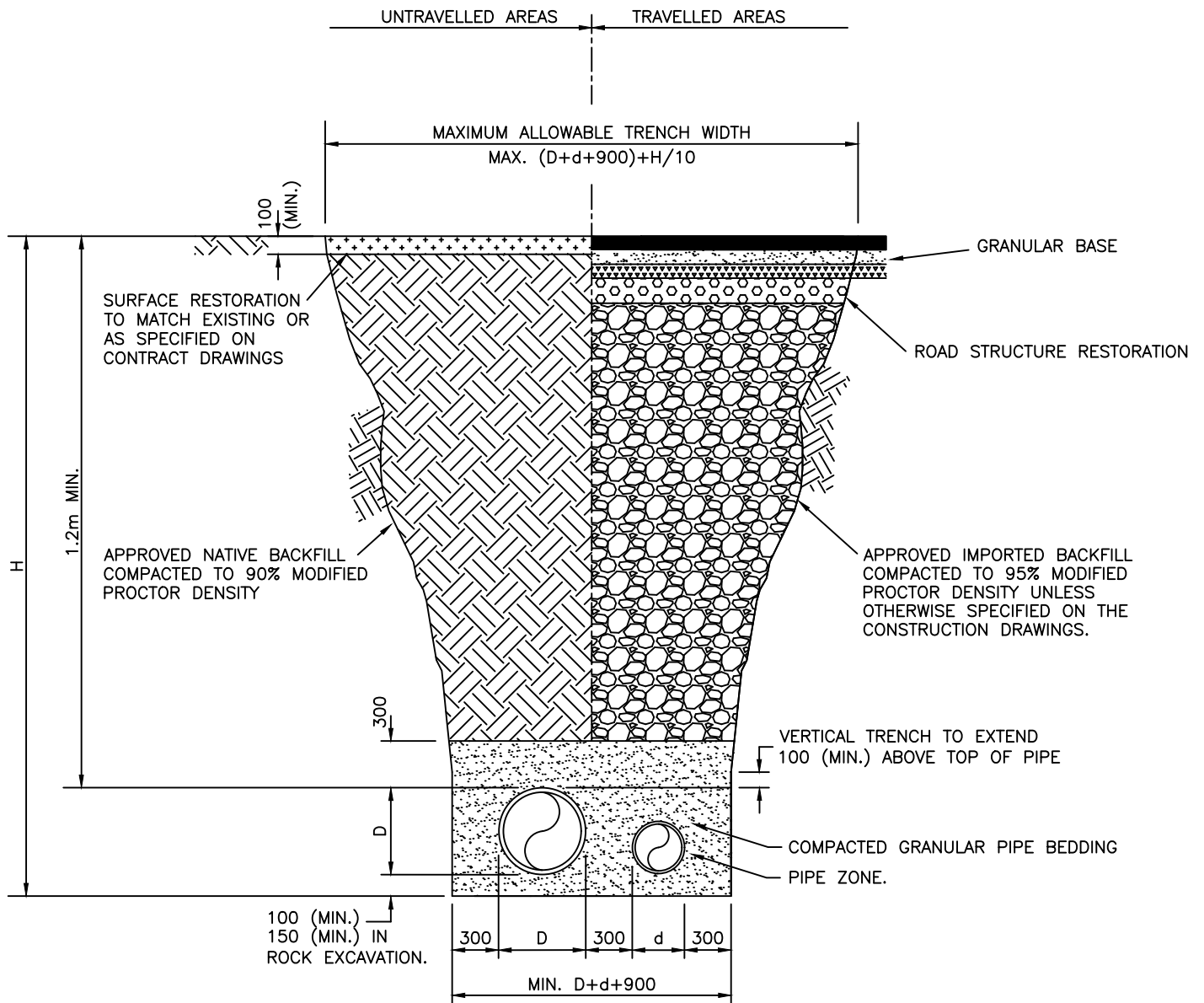
NOTES:

1. RIP RAP SUITABLY SIZED OR GABIONS C/W FILTER BED SHALL BE PLACED ON BOTTOM AND SIDES TO DESIGN WATER LEVEL AND DOWNSTREAM TO A DISTANCE OF 1.5 TIMES THE DESIGN WATER VELOCITY (MINIMUM 1m).
2. PIPE SIZES LARGER THAN 1050mm ϕ , WATER VELOCITIES GREATER THAN 2.13 m/s OR WALLS HIGHER THAN 2m REQUIRE A SPECIAL DESIGN FOR THE STRUCTURE.
3. REBAR 10M AT 200mm BOTH WAYS AND CENTRED PLUS ONE 10M AROUND PIPE.
4. REBARS TO HAVE MINIMUM 50mm COVER.
5. STRUCTURES – PRECAST OR *POURED IN PLACE. (*CONCRETE TO BE 21 MPa AT 28 DAYS.)
6. CHAMFER ALL EXPOSED CORNERS 25 mm.
7. PLACE SUFFICIENT GRANULAR BACKFILL FOR DRAINAGE.
8. GRILLAGE NOT REQUIRED ON PIPE LESS THAN 375mm ϕ .
9. ALL GRILLAGE MATERIALS TO BE GALVANIZED.

City of
Parksville

OUTLET STRUCTURE MAX PIPE
SIZE 1050mm DIA.

Scale	N.T.S.
Drawn	G.G.
Date:	JAN 2017
Dwg. No.	D6



D(d) = OUTSIDE DIAMETER

DEPTH OF BEDDING MATERIAL BELOW PIPE

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

NOTES:

1. UNDER THE TRAVELLED PORTION OF THE ROAD AND DRIVEWAYS, OR WITHIN 1m OF THE EDGE OF THE TRAVELLED ROAD, THE TRENCH WILL BE BACKFILLED WITH COMPACTED 75mm MINUS PIT RUN OR EQUAL UP TO BOTTOM OF ROAD SUB-BASE.
2. FOR EXCAVATION IN ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVER-EXCAVATED A MINIMUM OF 150mm FROM THE OUTSIDE COUPLINGS OR BELLS OF THE PIPES AND REFILLED WITH GRANULAR BEDDING MATERIAL.
3. ALL BEDDING MATERIALS TO BE COMPACTED IN 150 mm LIFTS TO A MINIMUM 95% MODIFIED PROCTOR DENSITY IN COMPLIANCE WITH ASTM D1557.

City of
Parksville

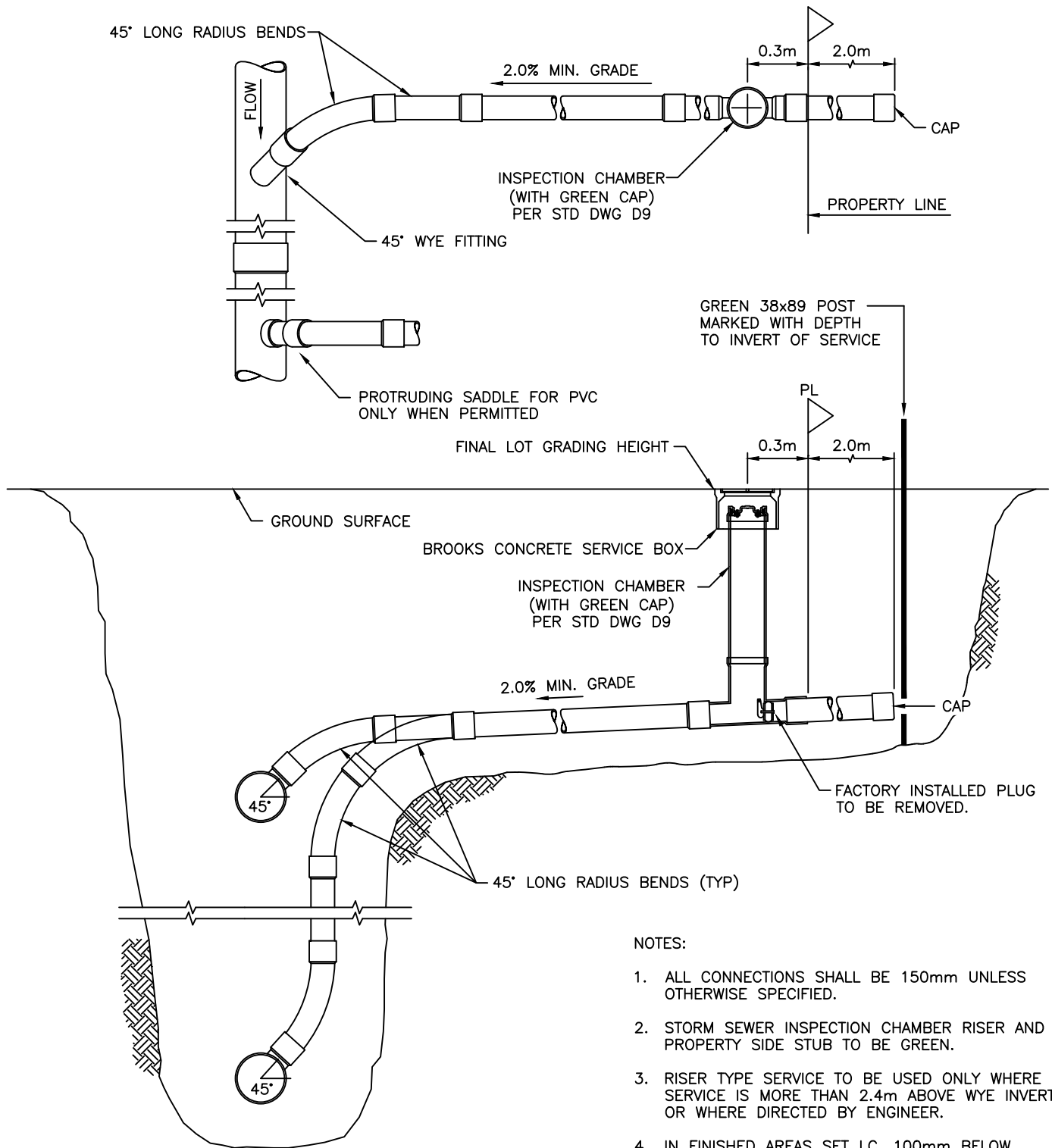
UTILITY TRENCH DETAIL

Scale N.T.S.

Drawn G.C.

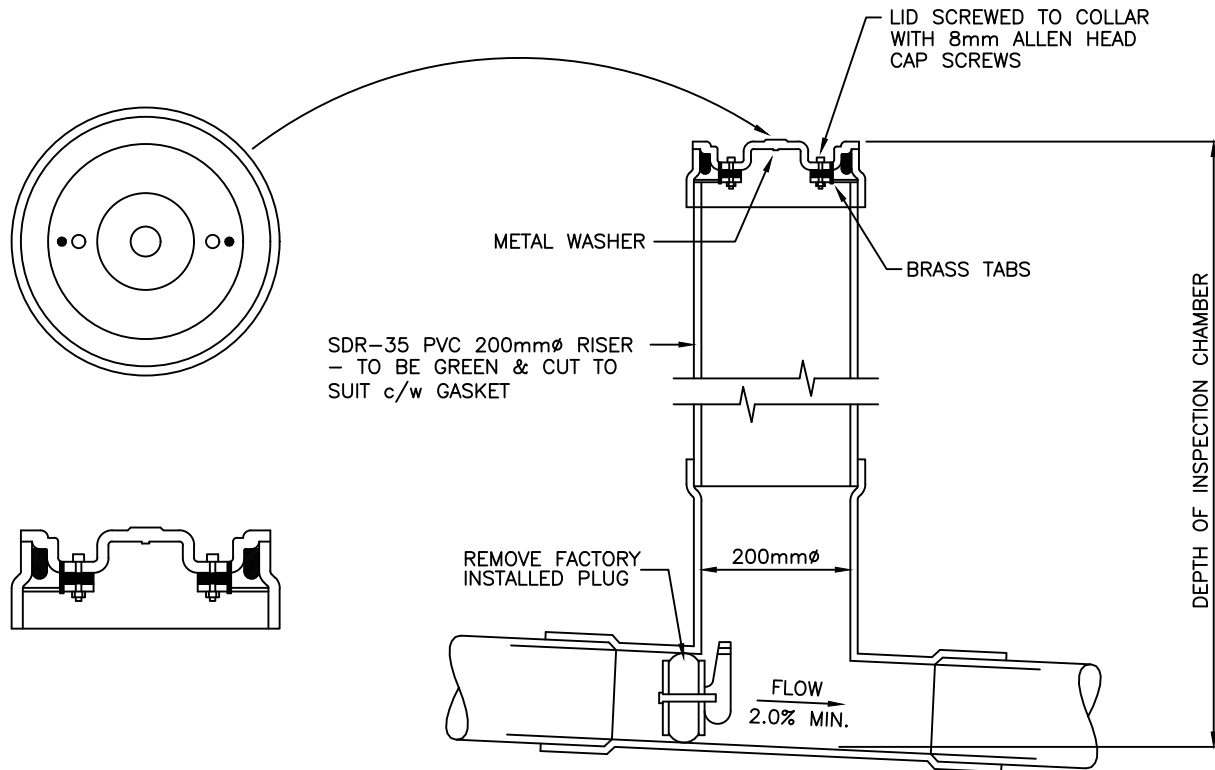
Date: AUG 2017

Dwg. No. D7

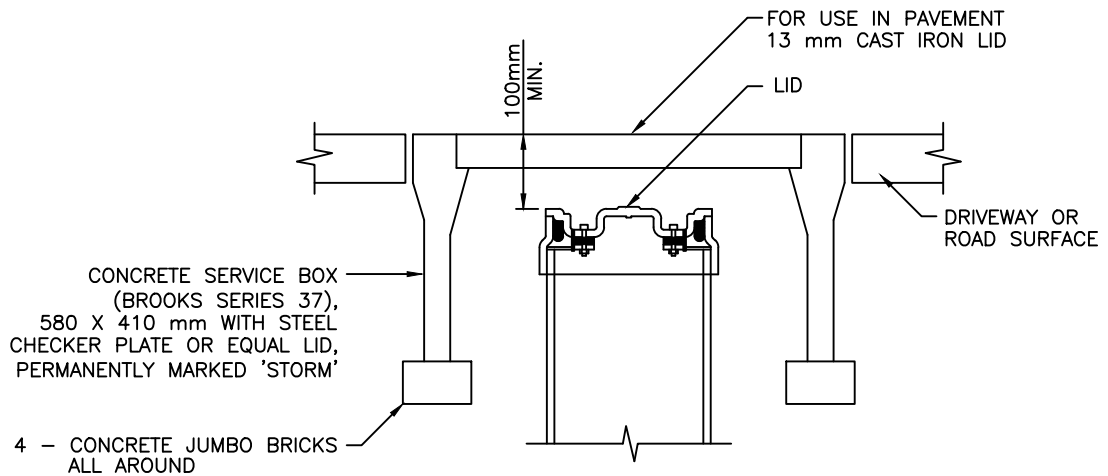


NOTES:

1. ALL CONNECTIONS SHALL BE 150mm UNLESS OTHERWISE SPECIFIED.
2. STORM SEWER INSPECTION CHAMBER RISER AND PROPERTY SIDE STUB TO BE GREEN.
3. RISER TYPE SERVICE TO BE USED ONLY WHERE SERVICE IS MORE THAN 2.4m ABOVE WYE INVERT OR WHERE DIRECTED BY ENGINEER.
4. IN FINISHED AREAS SET I.C. 100mm BELOW FINISHED GROUND PER STD DWG D9
5. ALL DIMENSIONS SHOWN IN MILLIMETRES UNLESS OTHERWISE STATED



NOTE:
150mm ϕ STORM SERVICE LINE CONNECTION, CAP GREEN



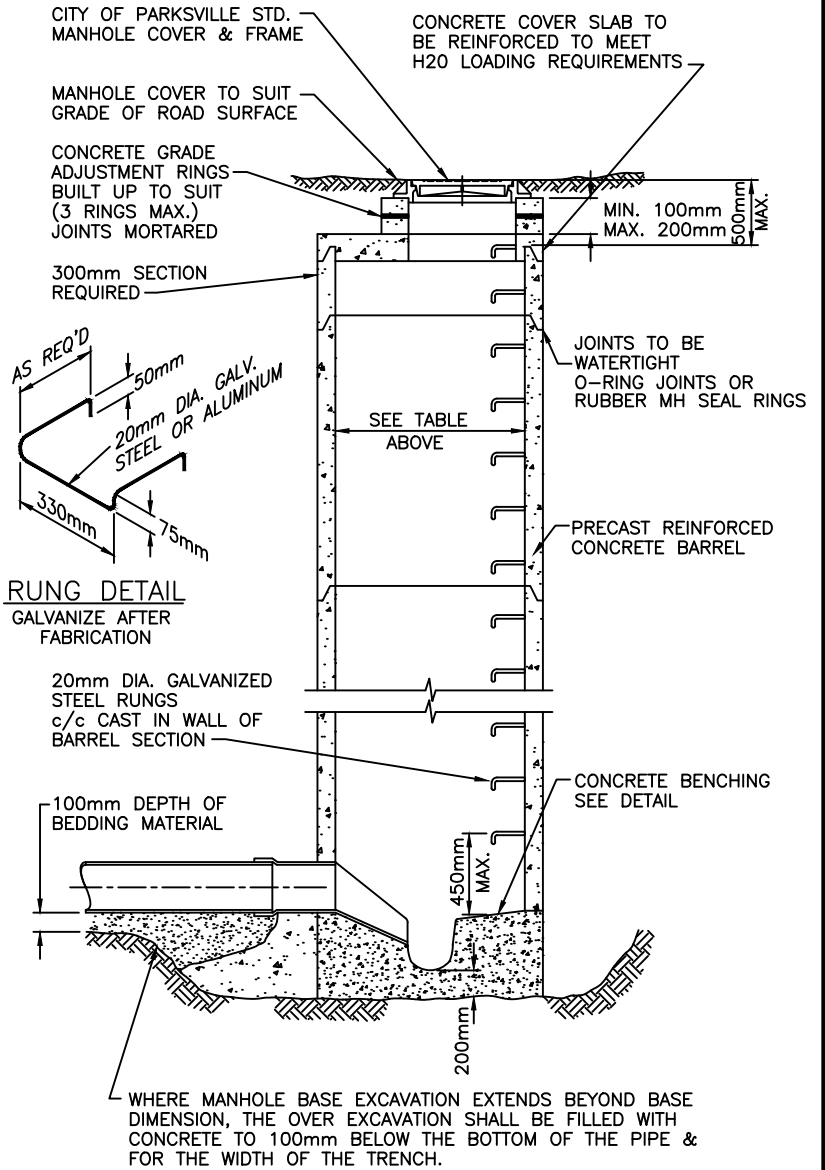
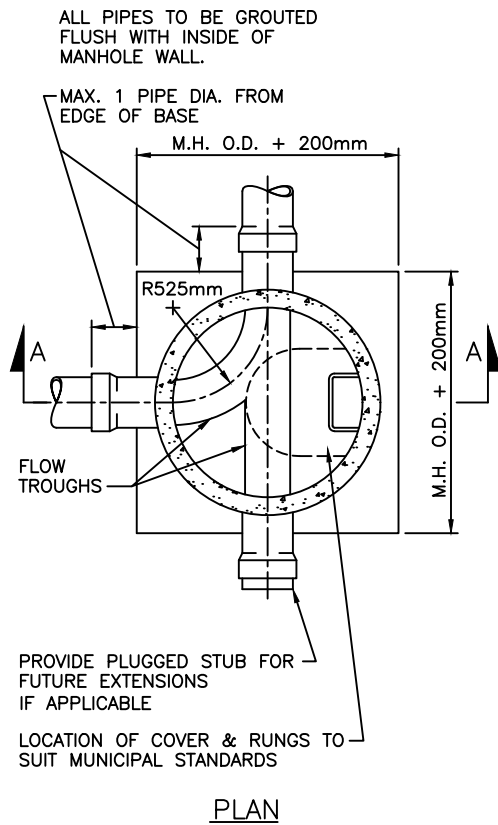
INSTALLATION OF INSPECTION CHAMBER

City of
Parksville

INSPECTION CHAMBER
FOR STORM SEWER CONNECTIONS

Scale	N.T.S.
Drawn	GC
Date:	NOV 2017
Dwg. No.	D9

INSIDE PIPE DIA.	INSIDE MANHOLE DIA.
450mm AND LESS	1050mm
525mm - 600mm	1200mm
675mm - 750mm	1350mm



RUNG DETAIL
GALVANIZE AFTER FABRICATION

SECTION A-A
TYPICAL MANHOLE

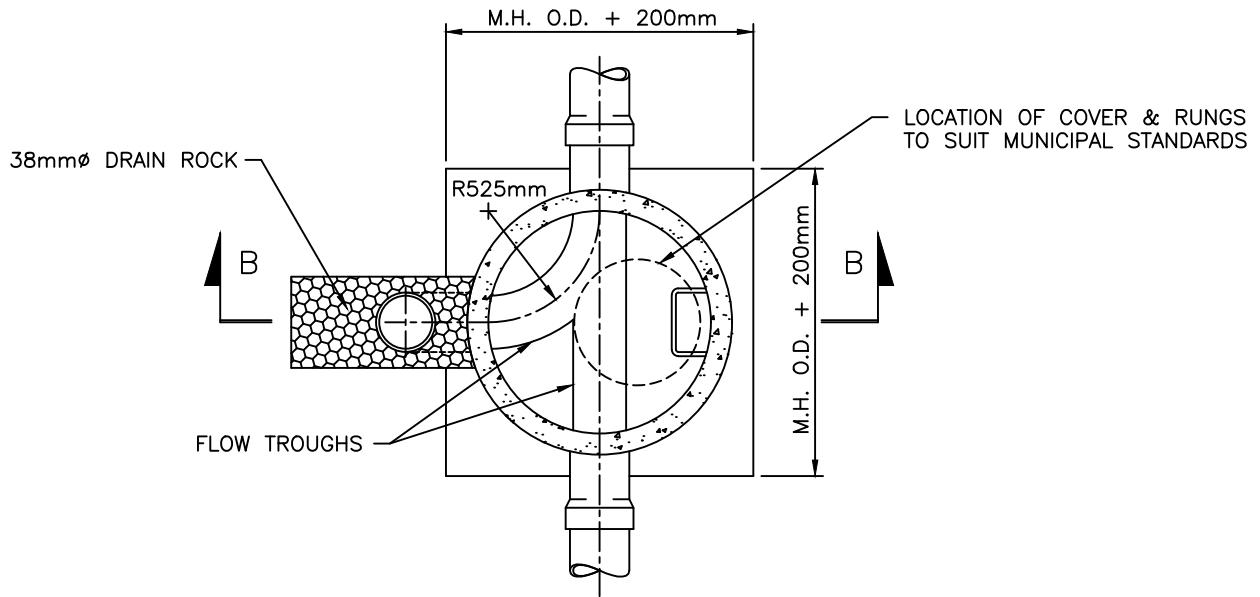
PRECAST REINFORCED CONCRETE BARREL TO ASTM C-478 M

LADDER PER CURRENT WSCB REQUIREMENTS

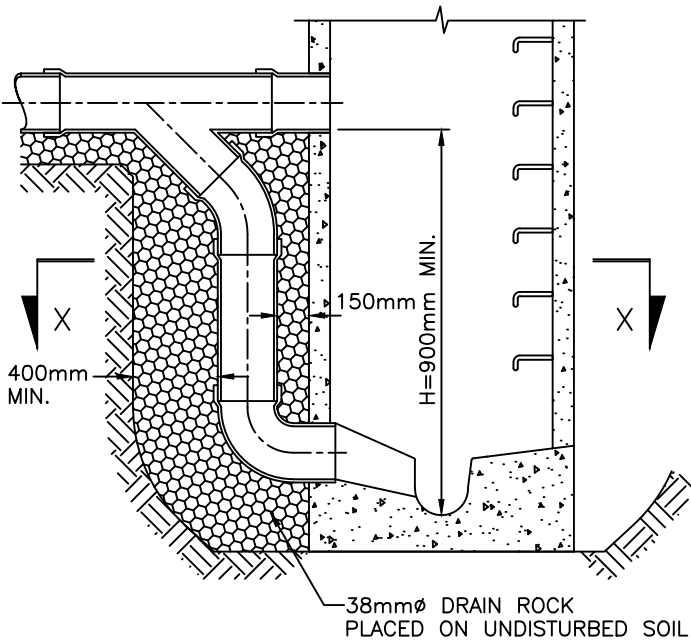
City of
Parksville

STANDARD PRECAST MANHOLE

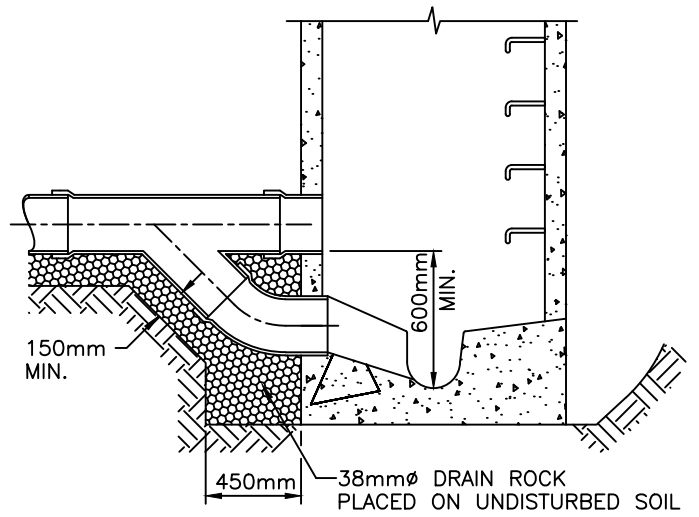
Scale N.T.S.
 Drawn G.G.
 Date: JAN 2017
 Dwg. No. D10



PLAN AT SECTION X-X SHOWING DROP



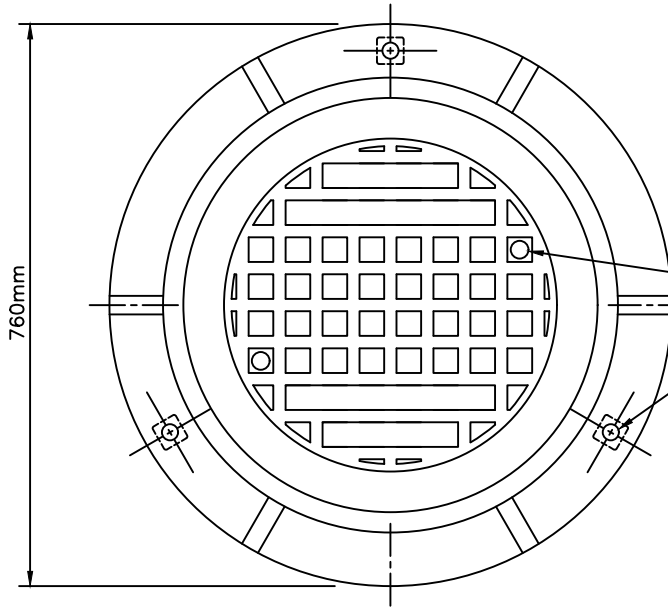
SECTION B-B
DROP MANHOLE TYPE I



SECTION B-B
DROP MANHOLE TYPE II

NOTE:

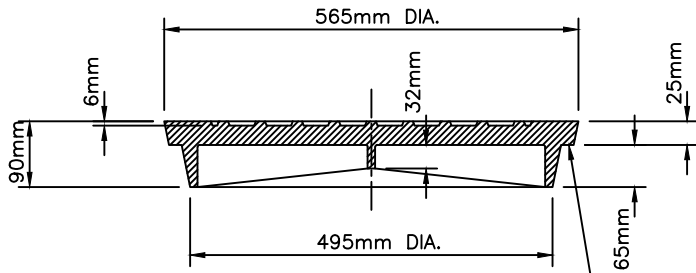
REFERRING TO "CITY OF PARKSVILLE STORM".
LETTERING SHALL BE 25mm FLATTENED FACE GOTHIC AND
SHALL BE RAISED TO THE SAME LEVEL AS THE TOP OF
THE RIBS.



22mm DIA. HOLE FOR LIFTING TOOL REQUIRED AS SHOWN.

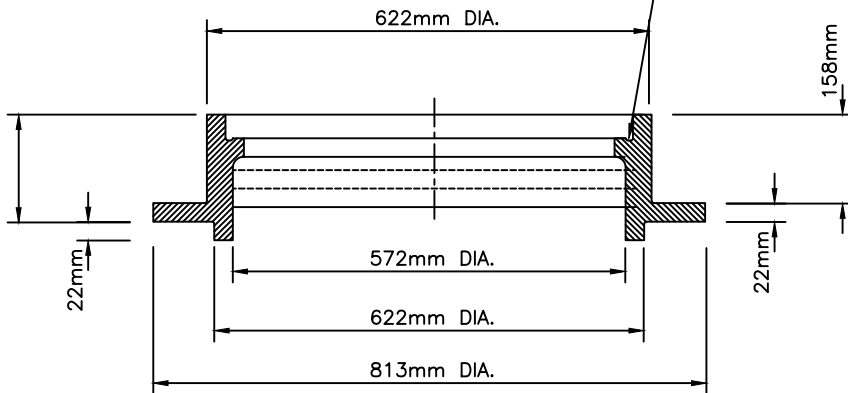
22mm DIA. LEVELLING HOLES WITH POCKET FOR SQUARE NUT.

PLAN



COVER

MACHINE SURFACE FOR NON ROCKING FIT IN ALL POSITIONS.
ALLOW 2mm RAISED FACE IN CASTING FOR MACHINING.

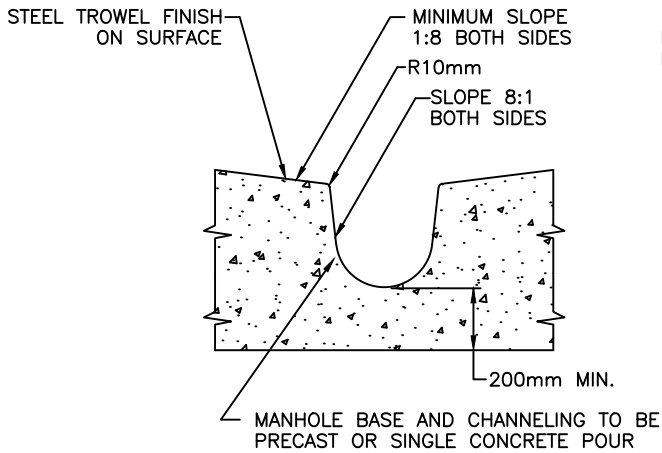


FRAME

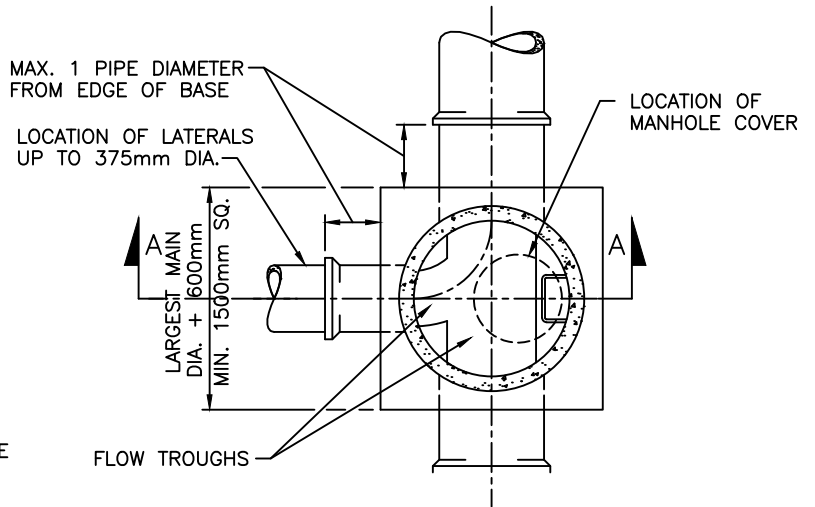
TYPE - DOBNEY FOUNDRY No. C-18 OR EQUIVALENT

APPROXIMATE WEIGHTS

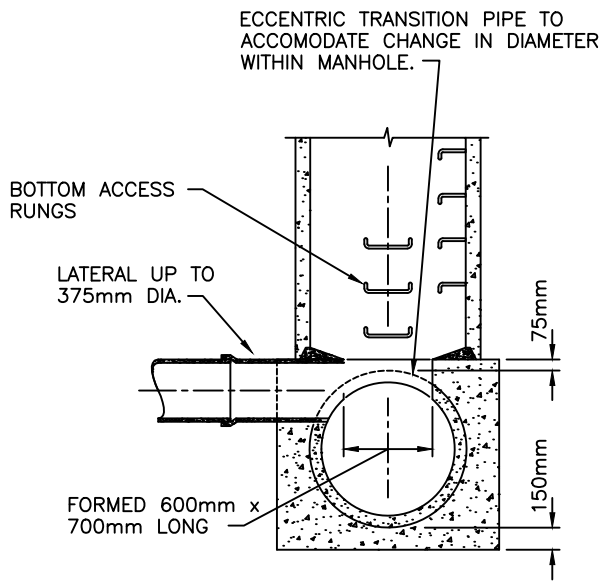
COVER - 66 kg
FRAME - 84 kg



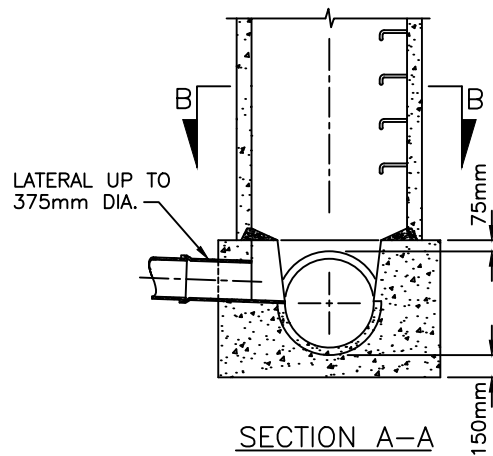
INVERT CHANNELLING IN MANHOLE



SECTION B-B



BASE SECTION THRU MANHOLES FOR PIPE 600mm DIA TO 750mm DIA.

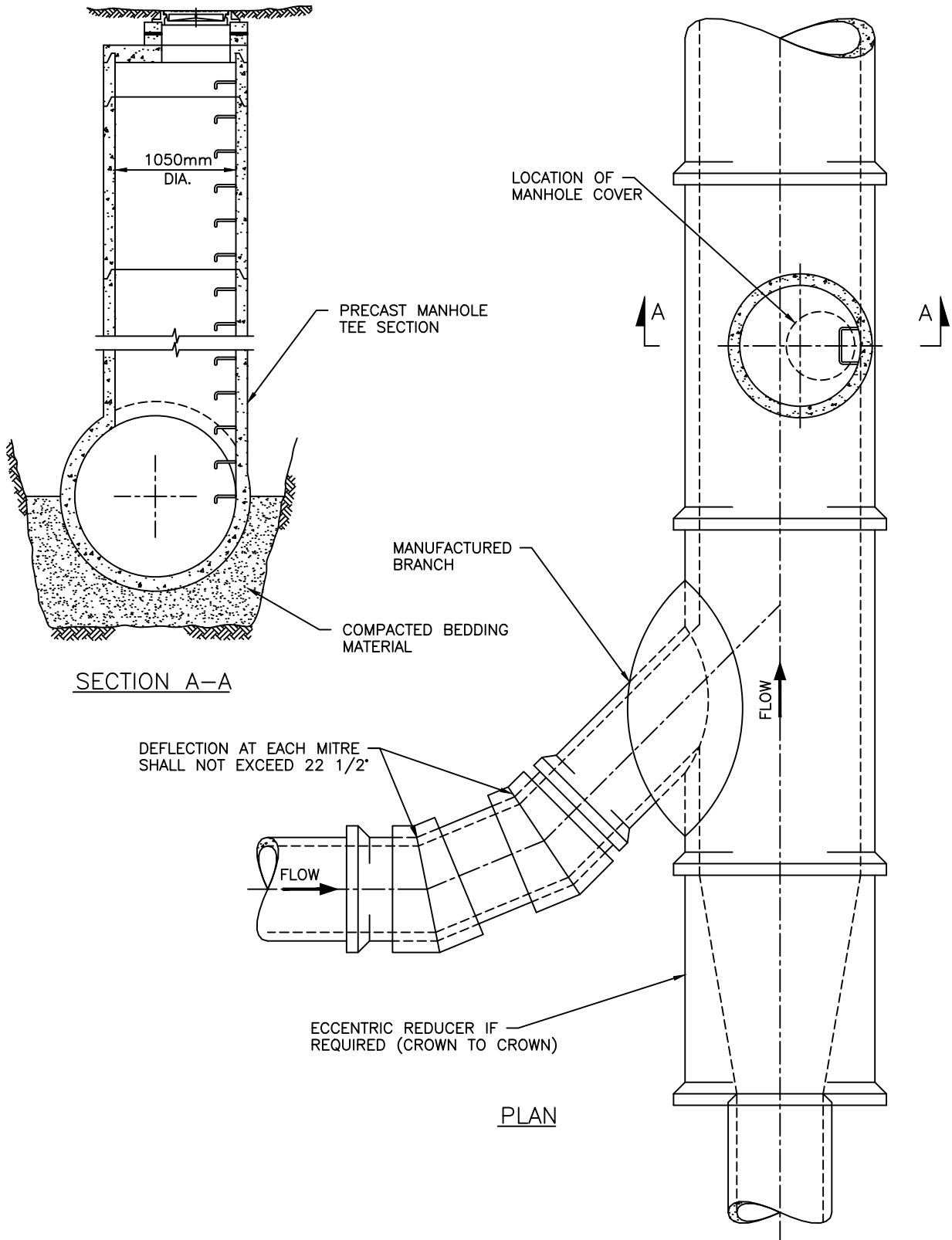


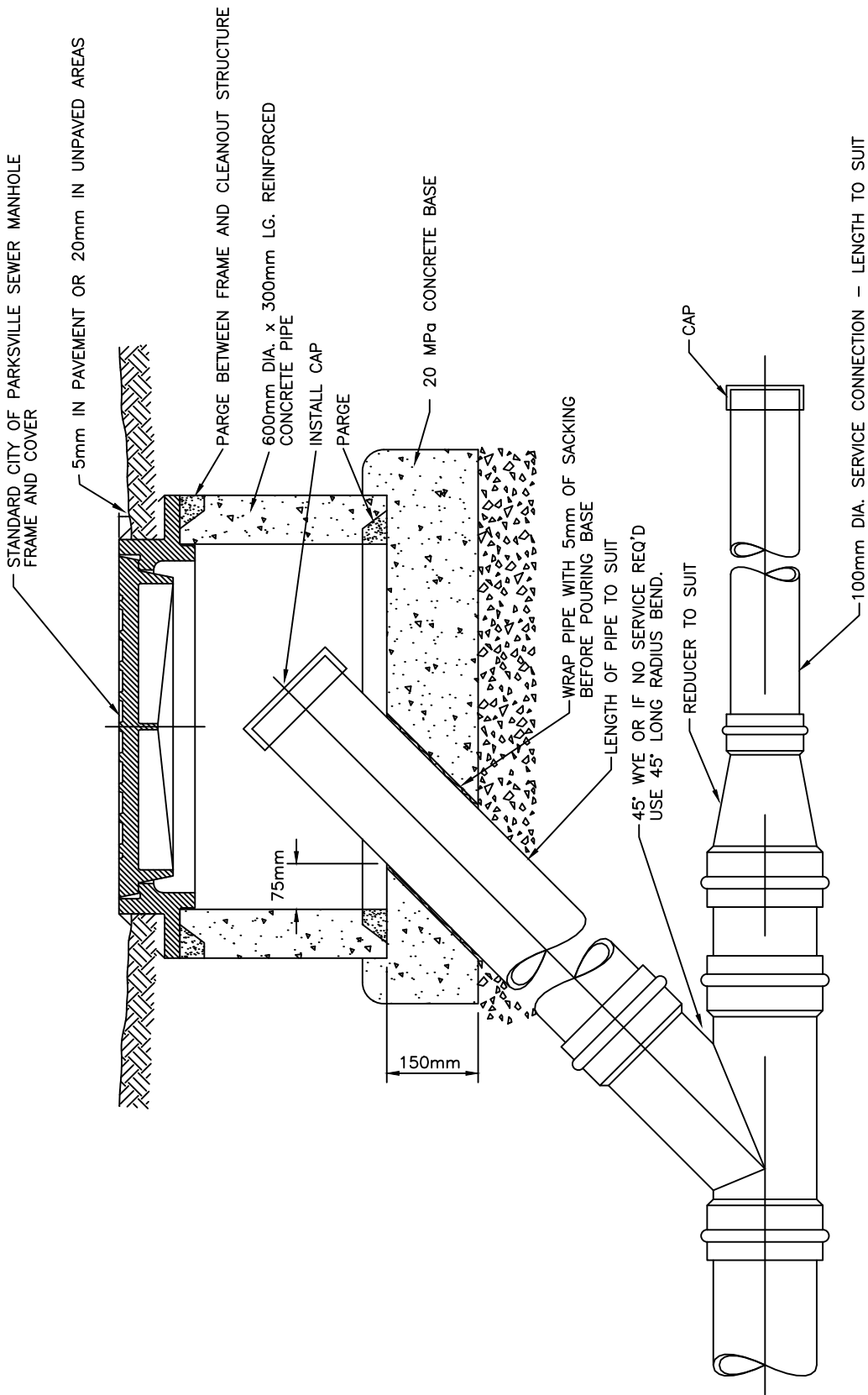
BASE SECTION THRU MANHOLES FOR PIPE UP TO 600mm DIA. INCLUSIVE

NOTES:

1.) THE MANHOLES DETAILED ON THIS STANDARD DRAWING SHALL BE USED ONLY WHERE LATERAL CONNECTIONS ARE 375 mm AND SMALLER. WHERE LATERALS 450 mm AND GREATER INTERSECT, THE MANHOLES SHALL BE CONSTRUCTED TO THE GUIDELINES SET BY DRAWING S5.

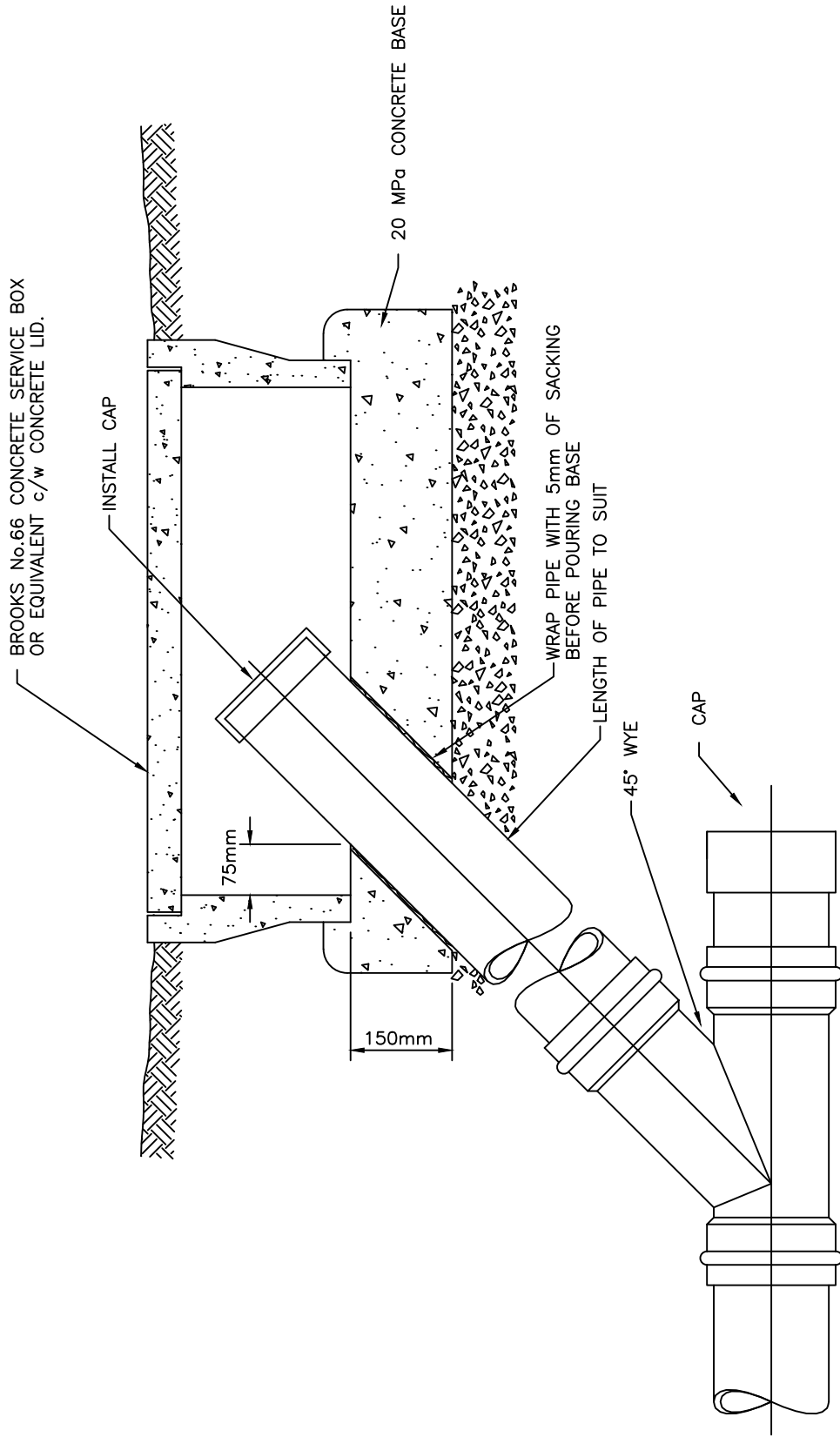
2.) MINIMUM MANHOLE SIZING REFER TO STANDARD DRAWING S5.





SECTIONAL ELEVATION

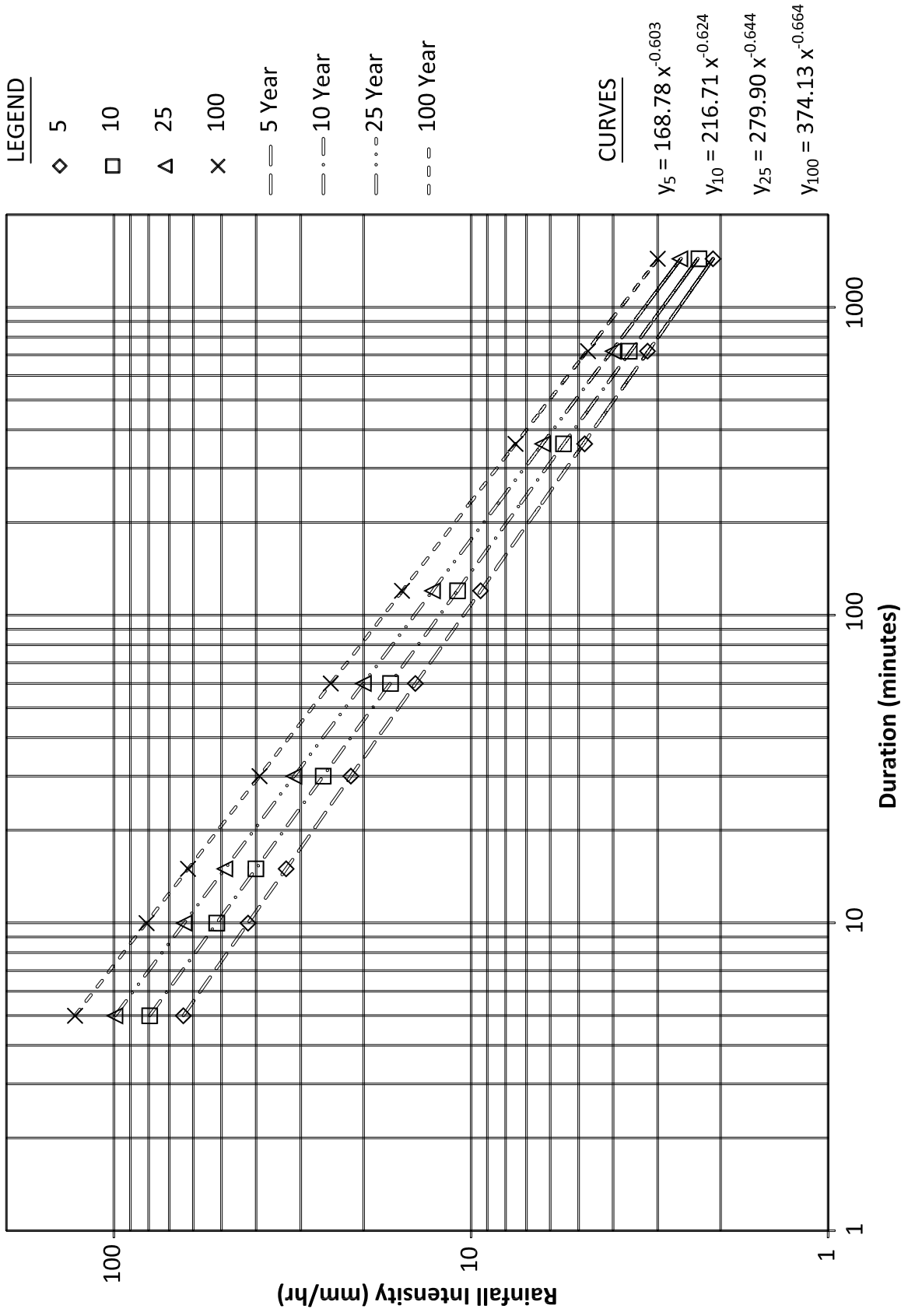
NOTES:
 1.) CLEANOUTS LOCATED ON GRAVEL ROADS OR SHOULDERS REQUIRE HOT MIXED ASPHALT APRONS EXTENDING 3m ON ALL SIDES OF THE CLEANOUT WIDTH OF GRAVEL SHOULDER IF LOCATED ADJACENT TO THE ROAD PAVEMENT.

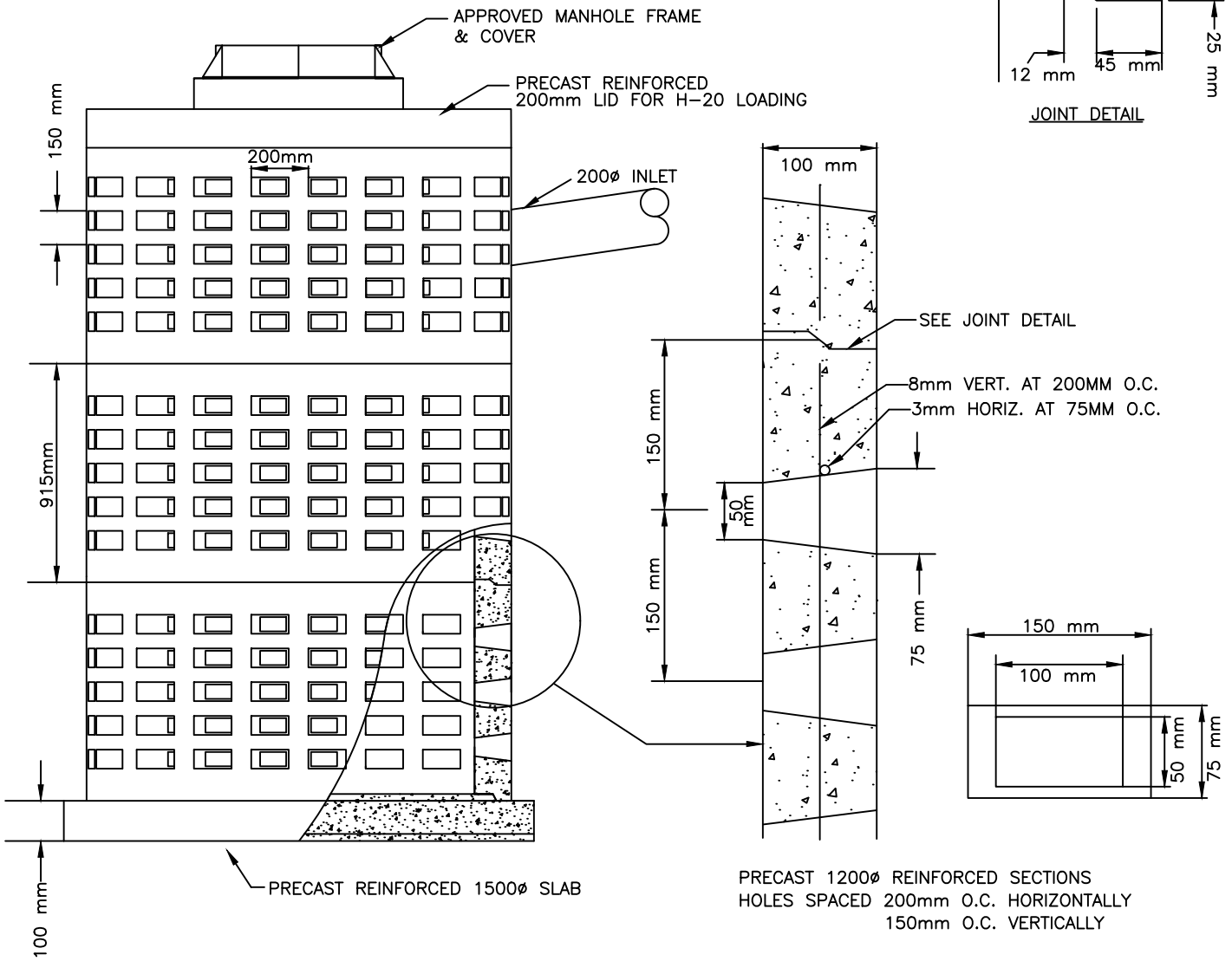
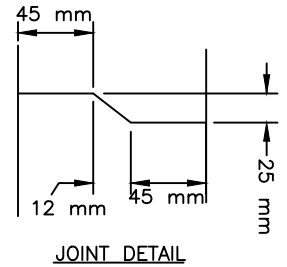
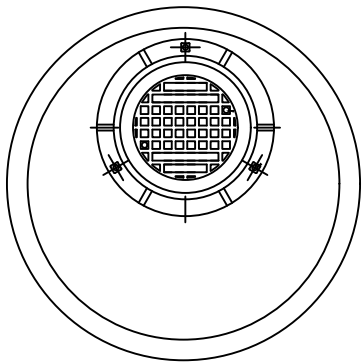


SECTIONAL ELEVATION

NOTES:
FOR USE IN EASEMENTS ONLY

Parksville IDF Curves





NOTE:

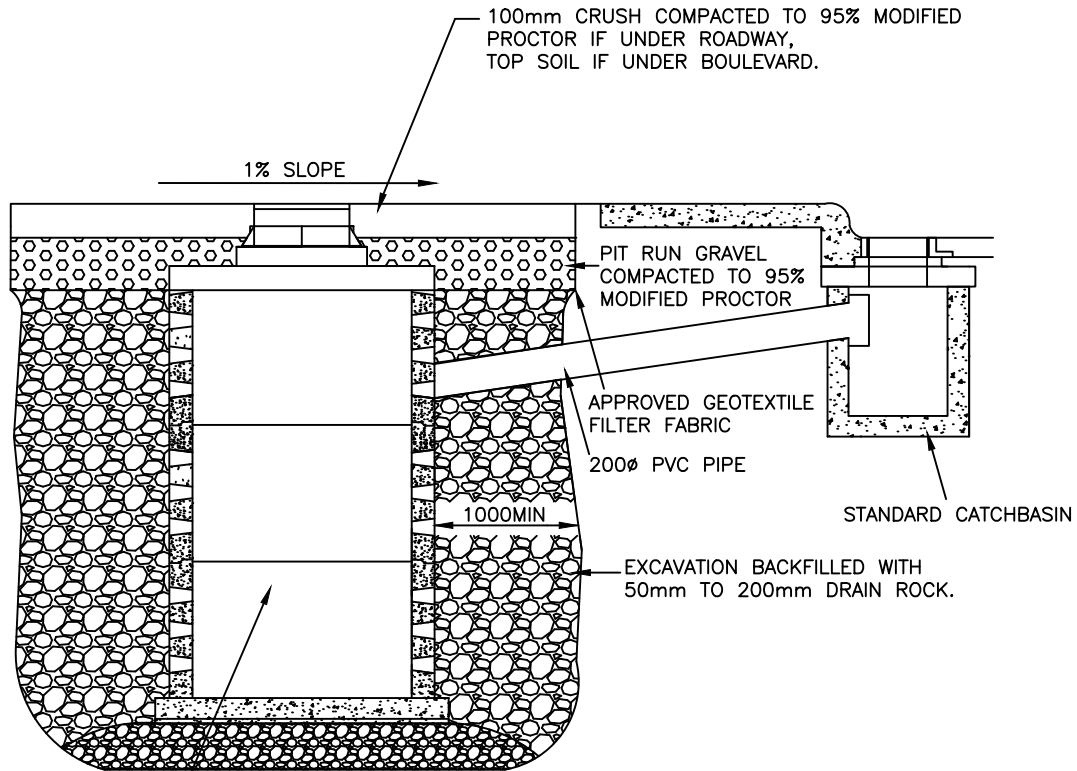
1. RUNGS SHALL BE INSTALLED PER STANDARD MANHOLE.

City of
Parksville

DRAINAGE DRYWELL

Scale	N.T.S.
Drawn	G.G.
Date:	JAN 2017
Dwg. No.	D18

TYPICAL INSTALLATION



DEPTH TO BE SPECIFIED MIN. 3m
WILL VARY DEPENDING UPON
DRAINAGE REQUIREMENTS AND
GROUND CONDITIONS - DEPTH TO
WATER TABLE MUST BE SHOWN IF
LESS THAN 3.6m.

40mm DRAIN ROCK REQUIRED
IF BASE UNSTABLE.

NOTES:

1. THE NUMBER AND SPACING OF DRAINAGE DRYWELLS MUST BE DETERMINED IN ACCORDANCE WITH DRAINAGE DESIGN CALCULATIONS, AND WILL DEPEND UPON THE AREA DRAINED AND EXISTING GROUND CONDITIONS.
2. FILTER FABRIC TO BE PLACED OVER TOP OF BARREL PRIOR TO PLACING COVER SLAB. ACCESS TO DRYWELL NOT TO BE CUT THROUGH FILTER FABRIC UNTIL FINAL INSPECTION.
3. THE DRYWELL SHALL BE INSTALLED ON THE UPHILL SIDE OF THE RIGHT OF WAY.
4. SEE STANDARD DRAWING D19 FOR DRYWELL DETAILS.