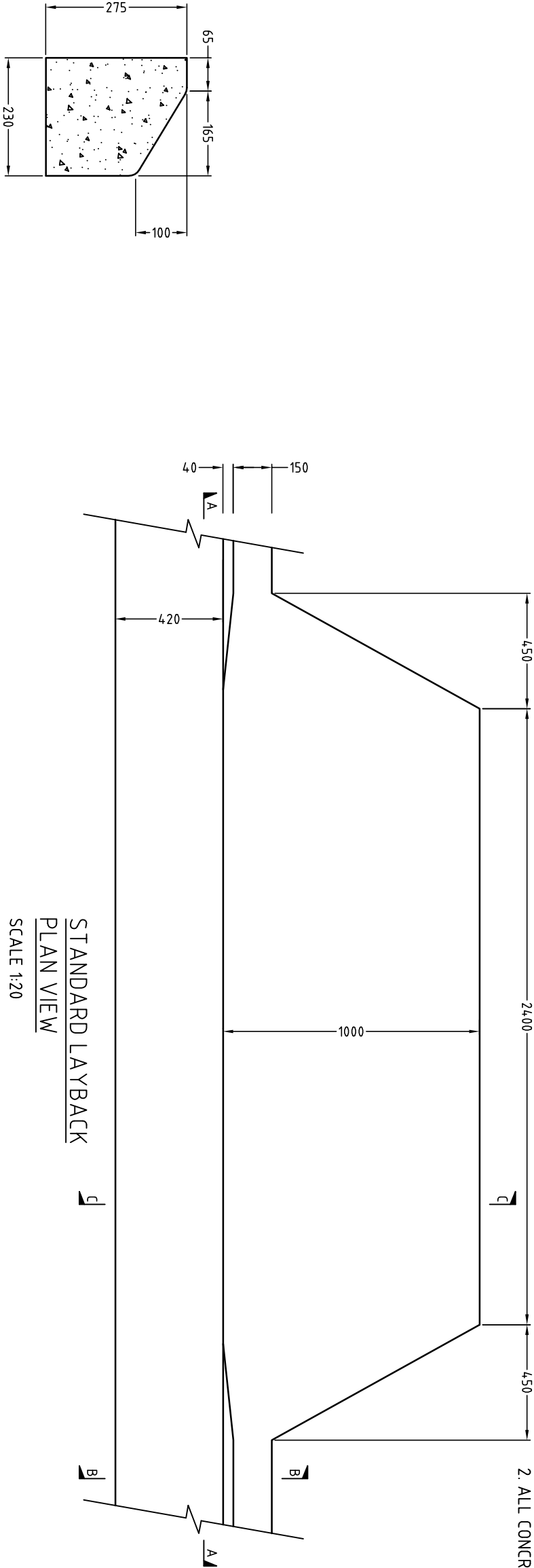


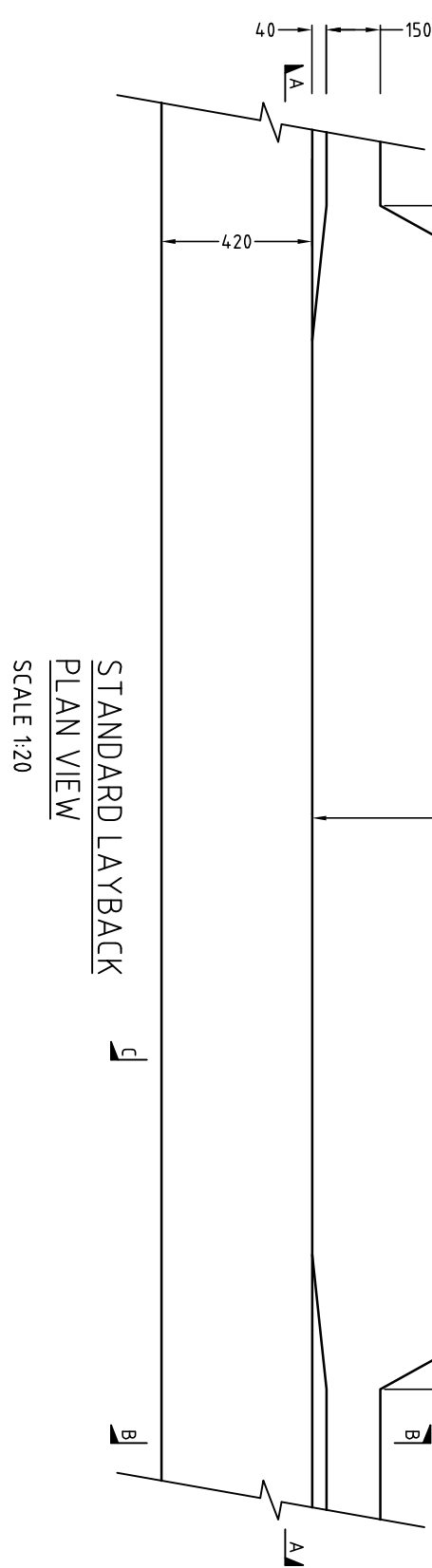
NOTES:

- 1. ALL DIMENSIONS IN MILLIMETRES
- 2. ALL CONCRETE TO BE 20MPa



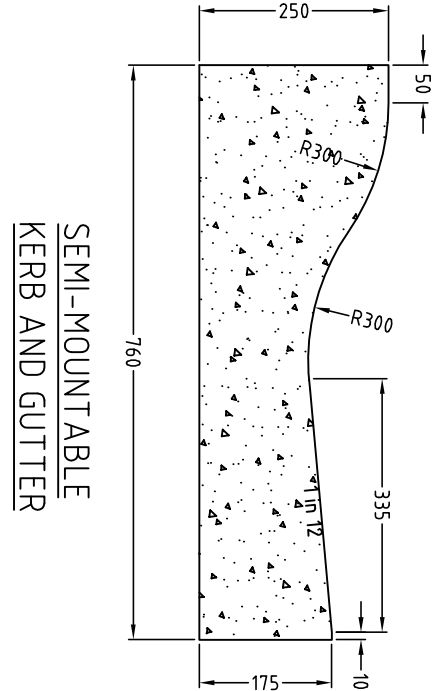
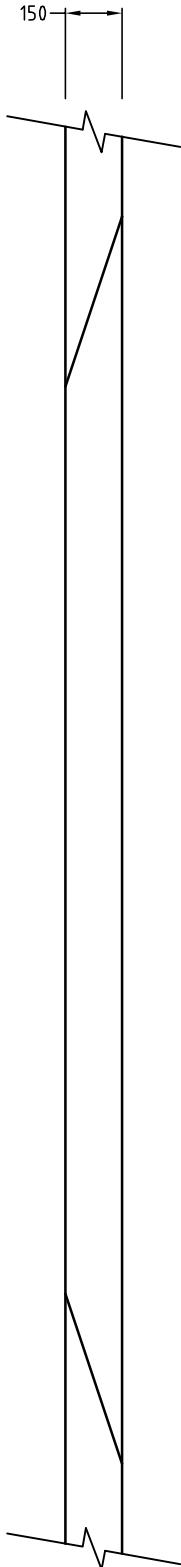
STANDARD LAYBACK  
PLAN VIEW

SCALE 1:20



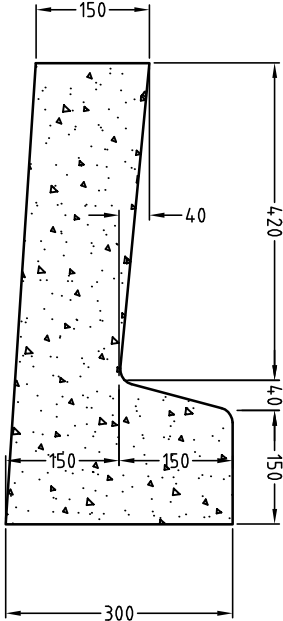
SECTION A-A

SCALE 1:20



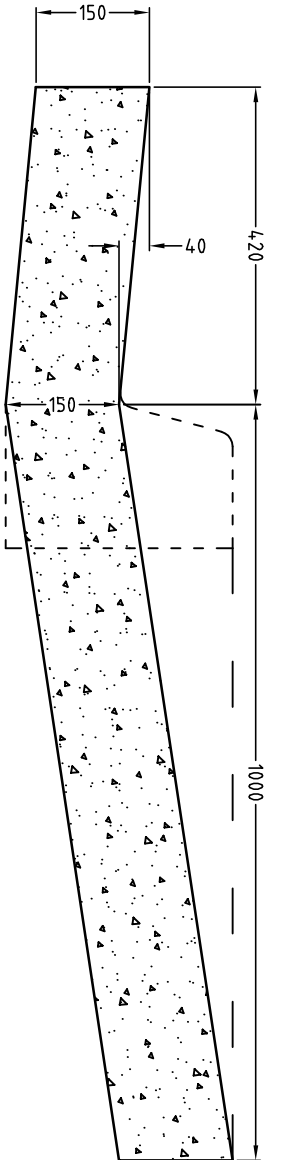
SEMI-MOUNTABLE  
KERB AND GUTTER

SCALE 1:10



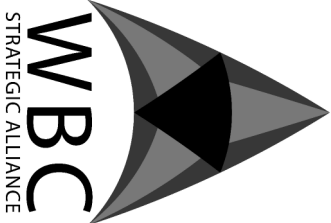
SECTION B-B

SCALE 1:10



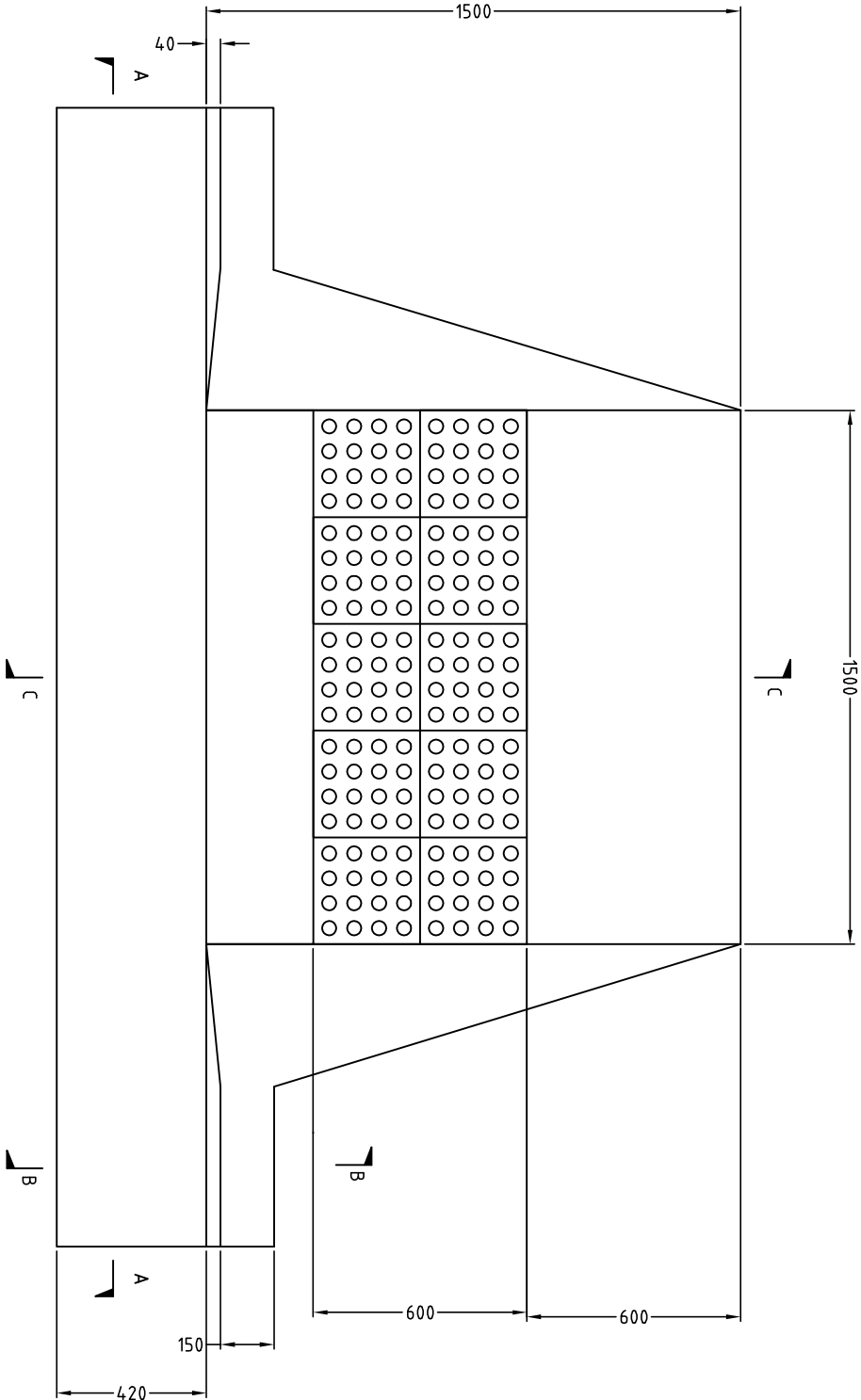
SECTION C-C

SCALE 1:10

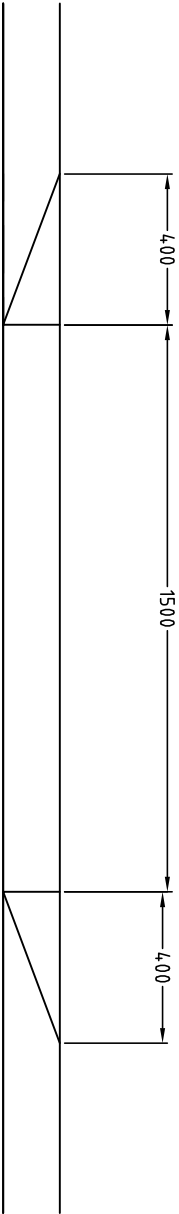
REV.	DESCRIPTION	INITIALS	DATE	<div><div>WBC STRATEGIC ALLIANCE</div></div>			PROJECT
A	ISSUED FOR COMMENT	NS	22/10/08				DESCRIPTION  STANDARD DETAILS  KERB AND GUTTER
B	ISSUED FOR COMMENT	JC	24/2/09				
C	APPROVED FOR USE	GSB	03/07/09				
				DWG NO.	WBC001	PAGE NO.	REVISION NO. C

NOTES:

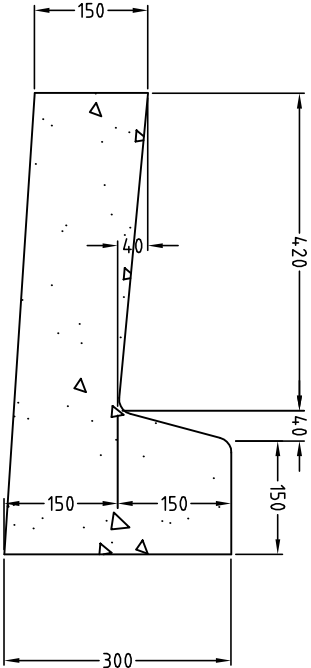
- 1. ALL DIMENSIONS IN MILLIMETRES
- 2. ALL CONCRETE TO BE 20MPa
- 3. NO LIP TO BE PLACED AT GUTTER LINE



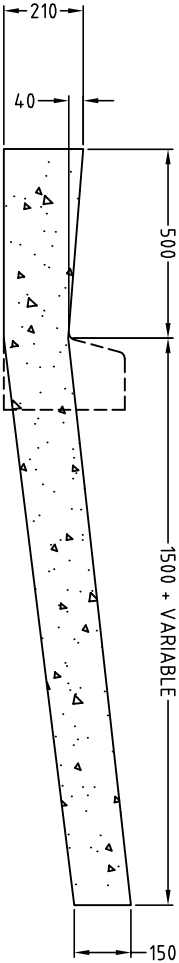
PRAM RAMPs  
PLAN VIEW  
SCALE 1:20



SECTION A-A  
SCALE 1:20

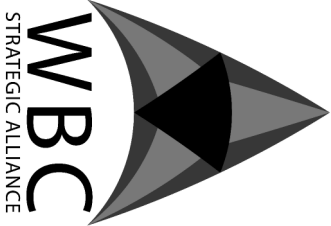


SECTION B-B  
SCALE 1:10

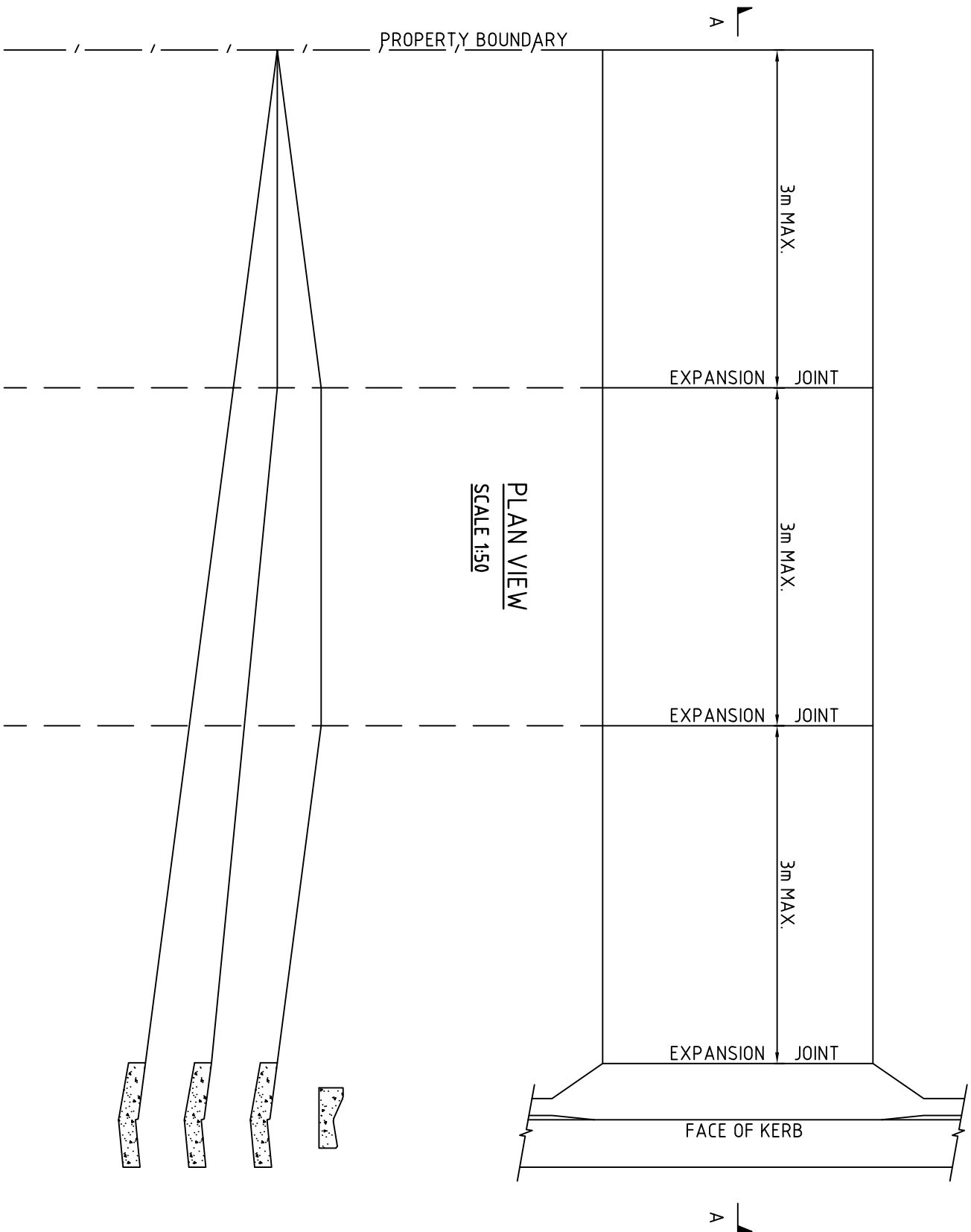


SECTION C-C  
SCALE 1:20

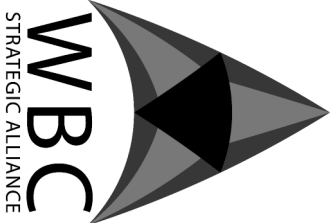
REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	STANDARD DETAILS  PERAMBULATOR RAMPs		
B	ISSUED FOR COMMENT	JC	24/2/09			
C	APPROVED FOR USE	GSB	03/07/09			
				DWG NO. WBC002		
				PAGE NO.	REVISION NO.	C



NOTES:  
1. FOOTPATH ALIGNMENT SUBJECT TO SITE  
CONDITIONS

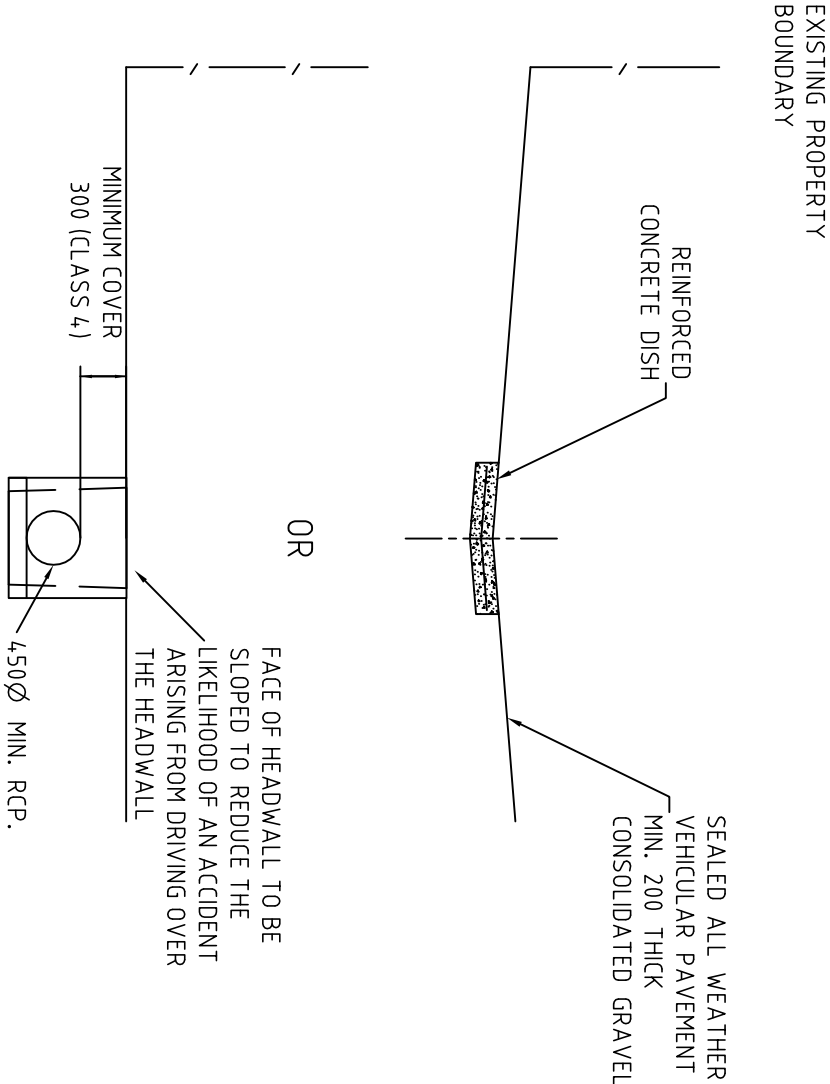
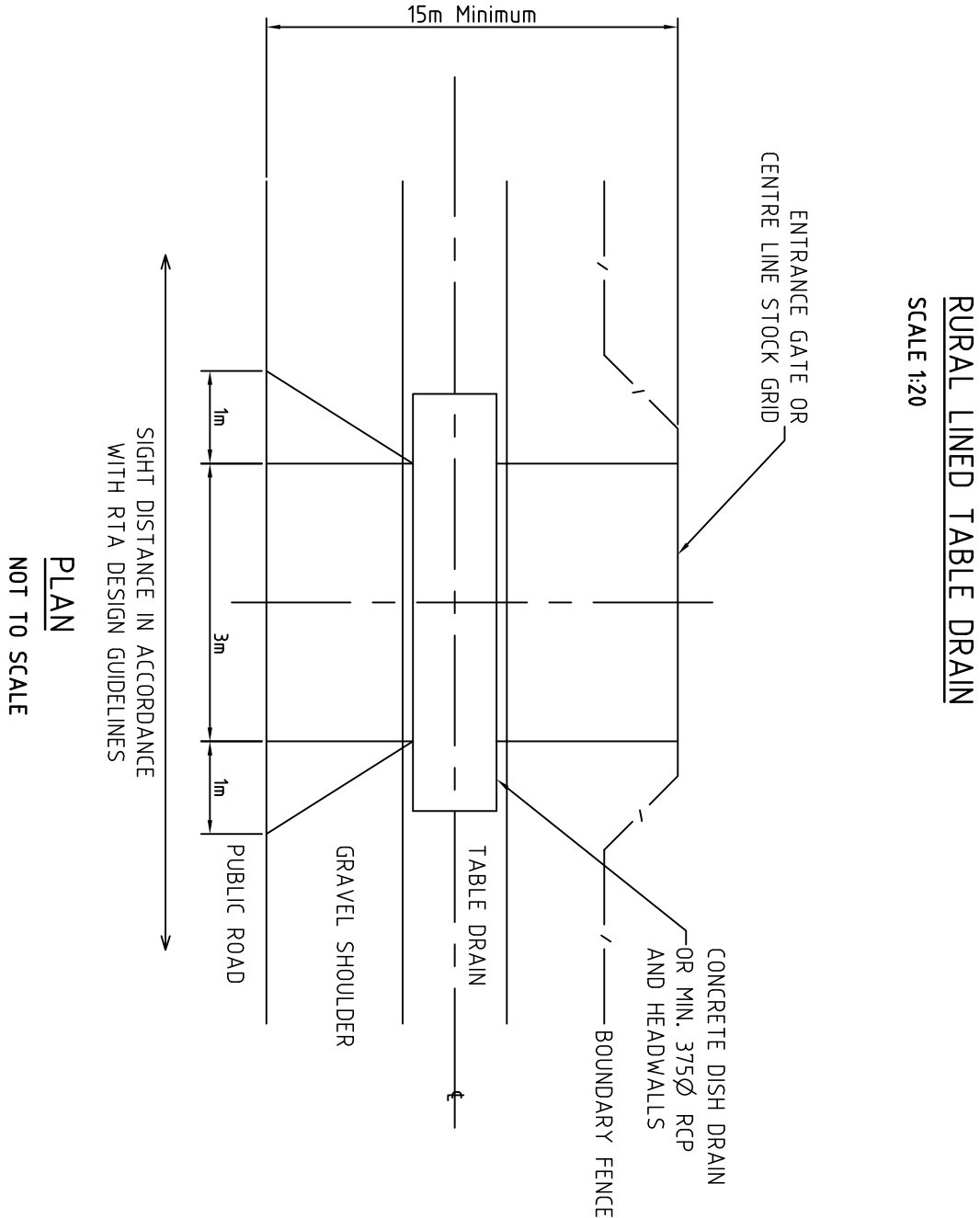
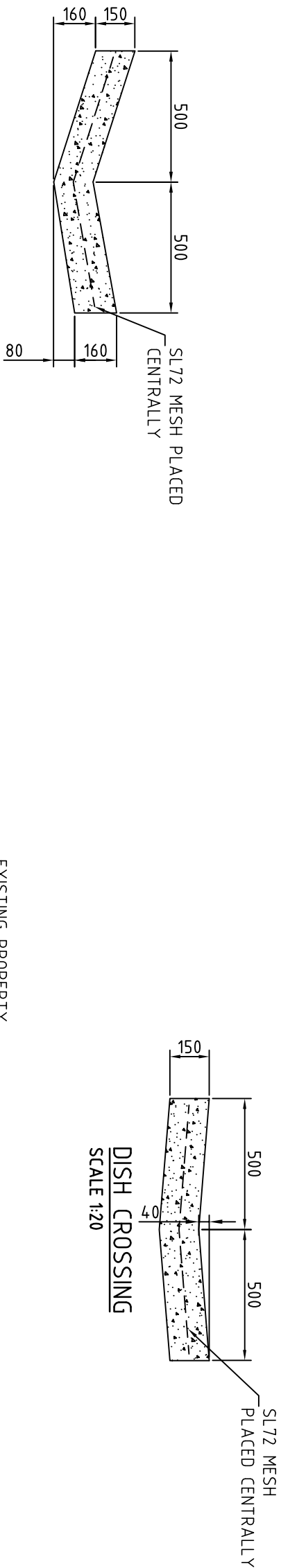


REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09



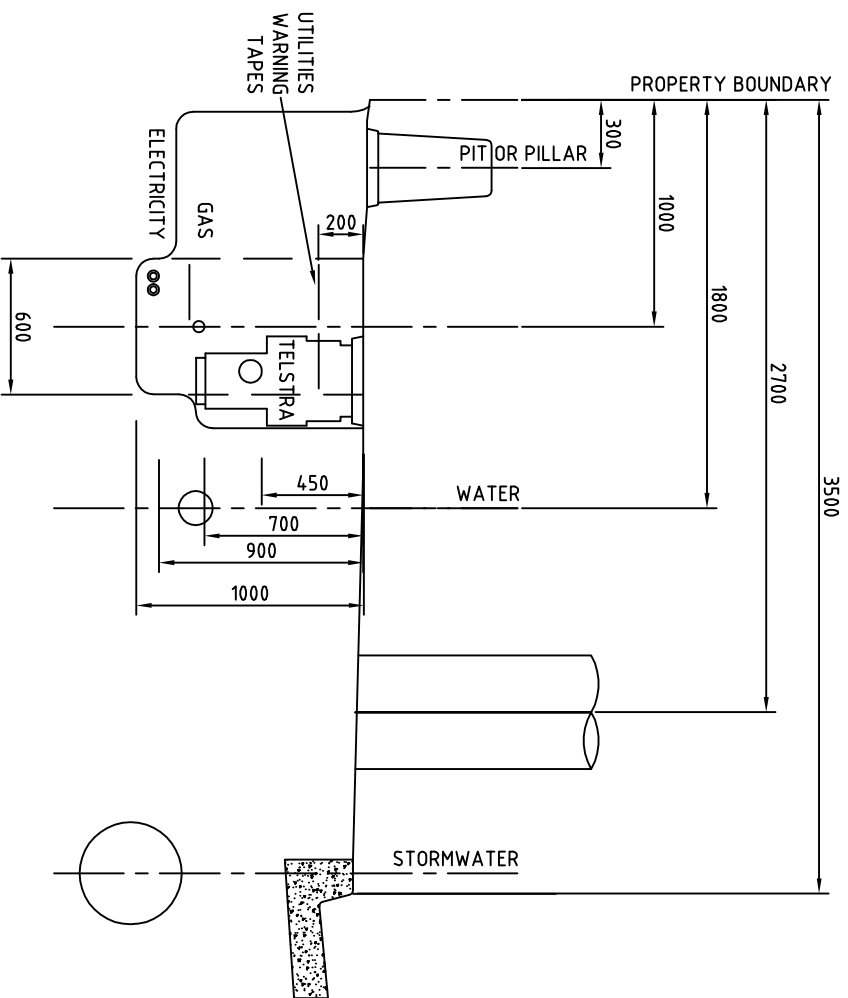
PROJECT			
STANDARD DETAILS			
DESCRIPTION			
URBAN VEHICULAR ACCESS			
DWG NO.	WBC003	PAGE NO.	REVISION NO.
			C

NOTES:



REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	<div>WBC</div> <div>STRATEGIC ALLIANCE</div>		
B	ISSUED FOR COMMENT	JC	24/2/09			
C	APPROVED FOR USE	GSB	03/07/09			
				<div>DESCRIPTION</div> <div>RURAL VEHICULAR ACCESS</div>		
				DWG NO.	PAGE NO.	REVISION NO.
				WBC004		C

NOTES:

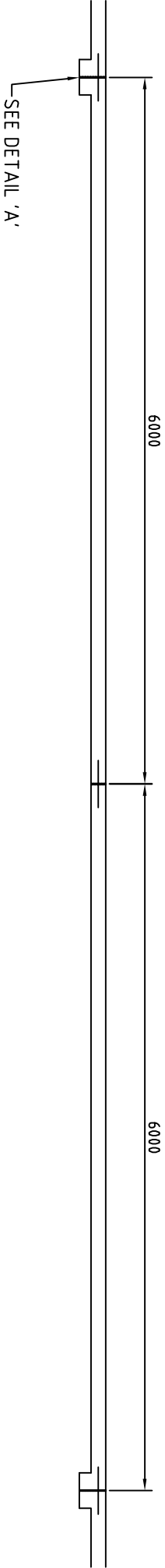


### 3.5m FOOTPATH ALLOCATIONS

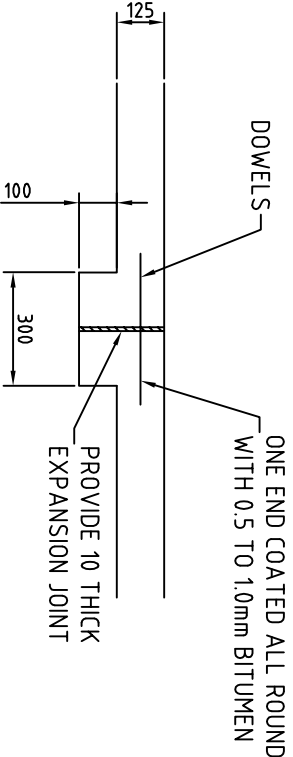
REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09

PROJECT  STANDARD DETAILS	DESCRIPTION		
	PUBLIC UTILITIES		
	FOOTPATH ALLOCATIONS		
	DWG NO. WBC005	PAGE NO.	REVISION NO. B

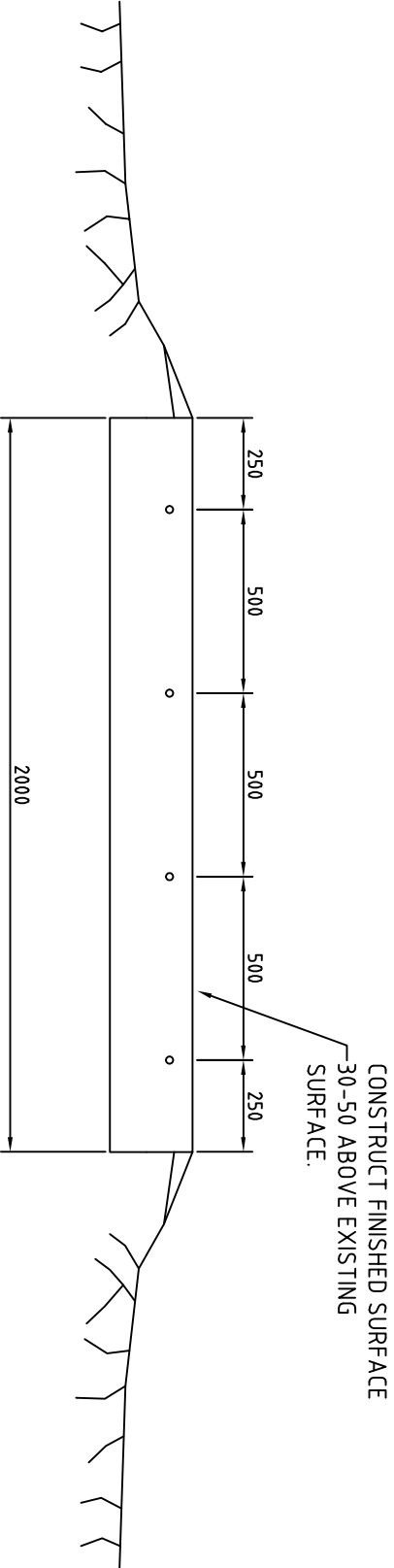
- NOTES:**
- 1. ALL DIMENSIONS IN MILLIMETRES
  - 2. ALL CONCRETE TO BE 20MPa, BROOM FINISH
  - 3. R20 DOWELS, 400 LONG @ 500 C/C
  - 4. ALL JOINTS ARE SMOOTH &/OR AT SAME LEVEL



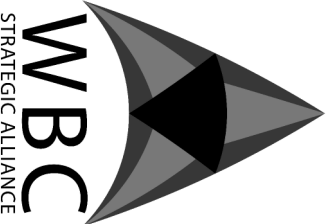
**ELEVATION**  
SCALE 1:50



**DETAIL A**  
SCALE 1:20



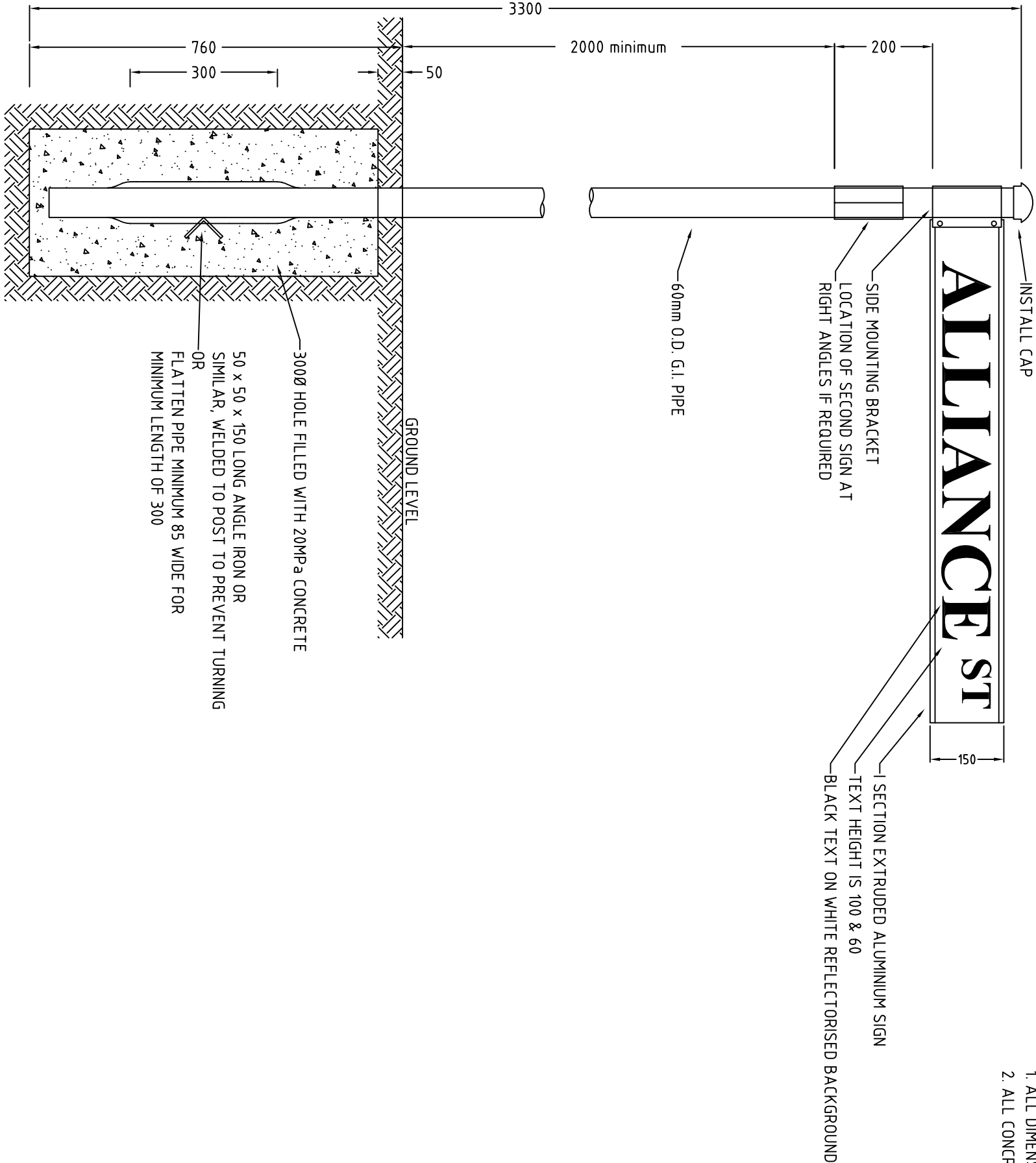
**TYPICAL CROSS SECTION**  
SCALE 1:20

REV.	DESCRIPTION	INITIALS	DATE	<div><div>PROJECT</div><div>DESCRIPTION</div><div>CONCRETE CYCLEWAYS</div></div>		
A	ISSUED FOR COMMENT	NS	22/10/08			
B	APPROVED FOR USE	GSB	03/07/09			
				DWG NO.	PAGE NO.	REVISION NO.
				WBC006		B

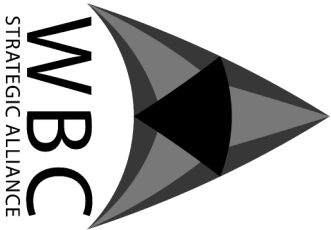


NOTES:

- 1. ALL DIMENSIONS IN MILLIMETRES
- 2. ALL CONCRETE TO BE 20MPa



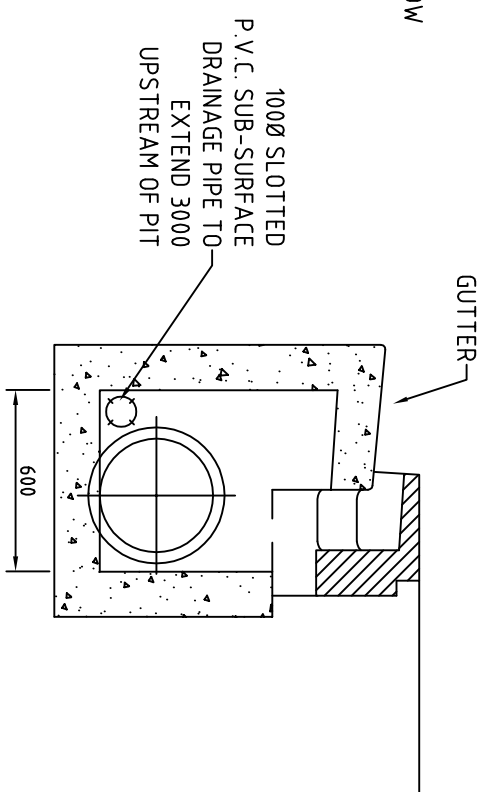
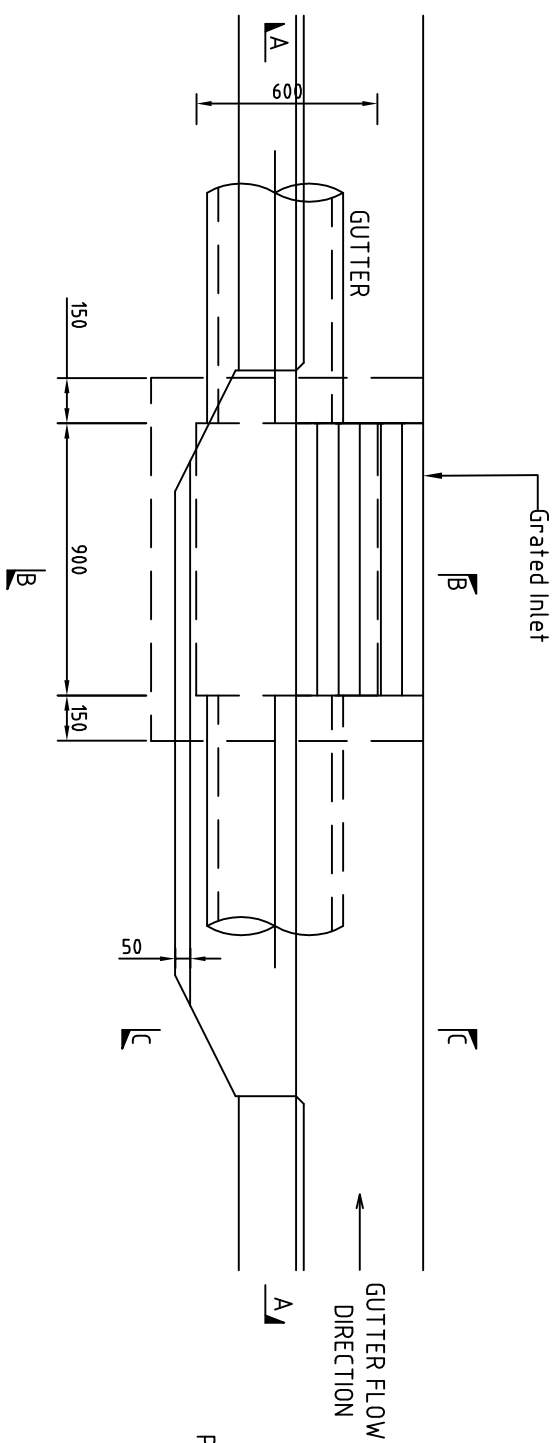
REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	STANDARD DETAILS		
B	APPROVED FOR USE	GSB	03/07/09			
				DESCRIPTION		
				STREET SIGNS		
				DWG NO.	PAGE NO.	REVISION NO.
				WBC008		B





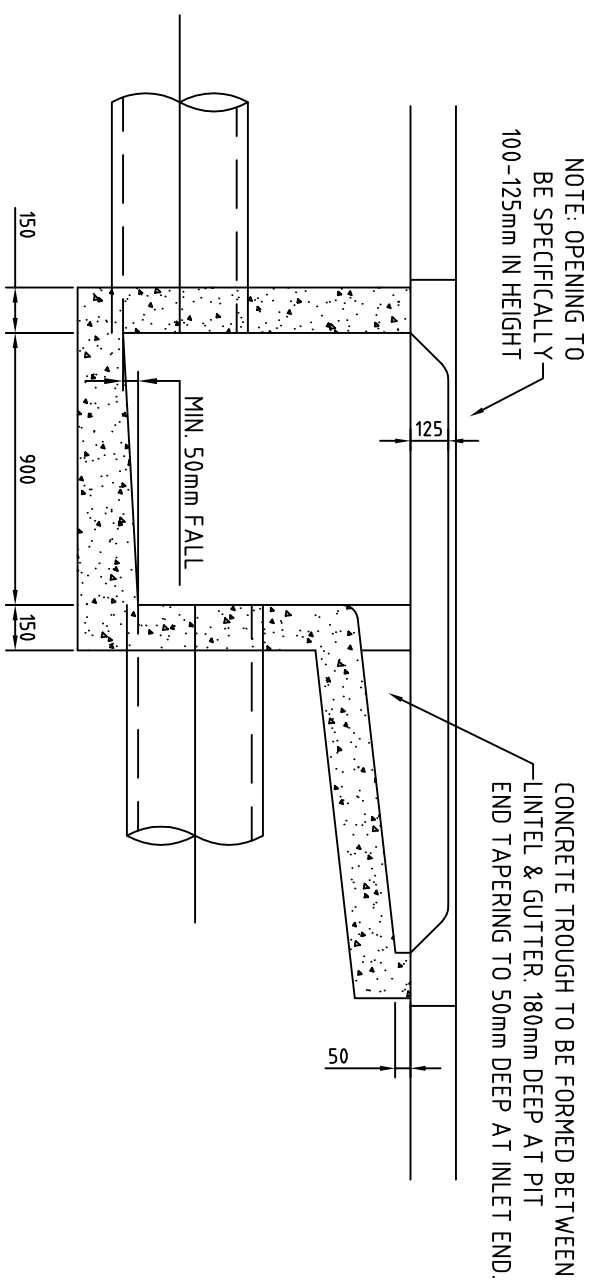
NOTES:

1. CONCRETE TO BE 20MPa.
2. REINFORCE SIDEWALLS WITH SL72 MESH WHEN DEPTH IS GREATER THAN 1500.

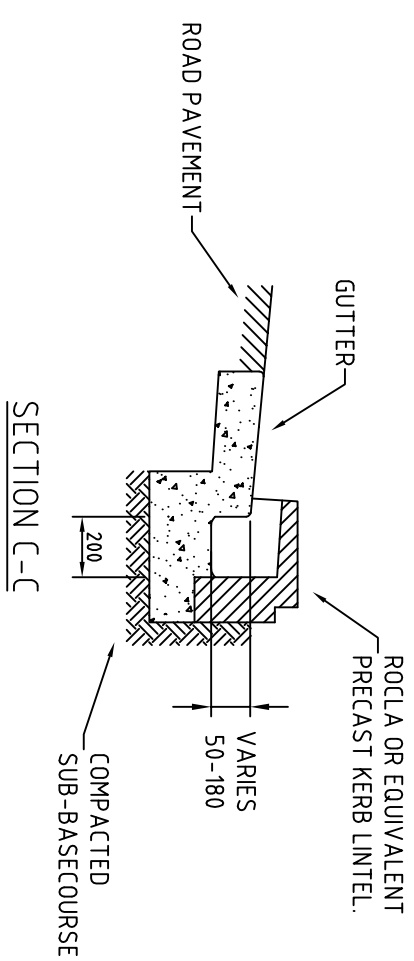


## PLAN

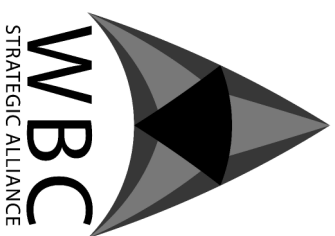
## SECTION B-B



## SECTION A-A



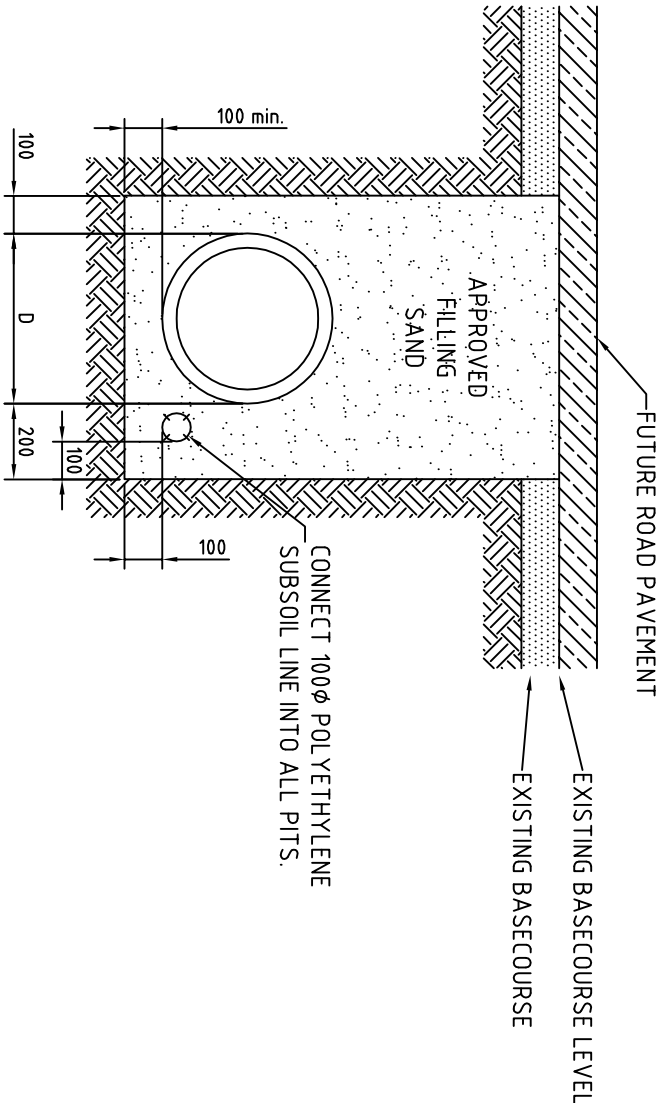
## SECTION C-C

[illegible]

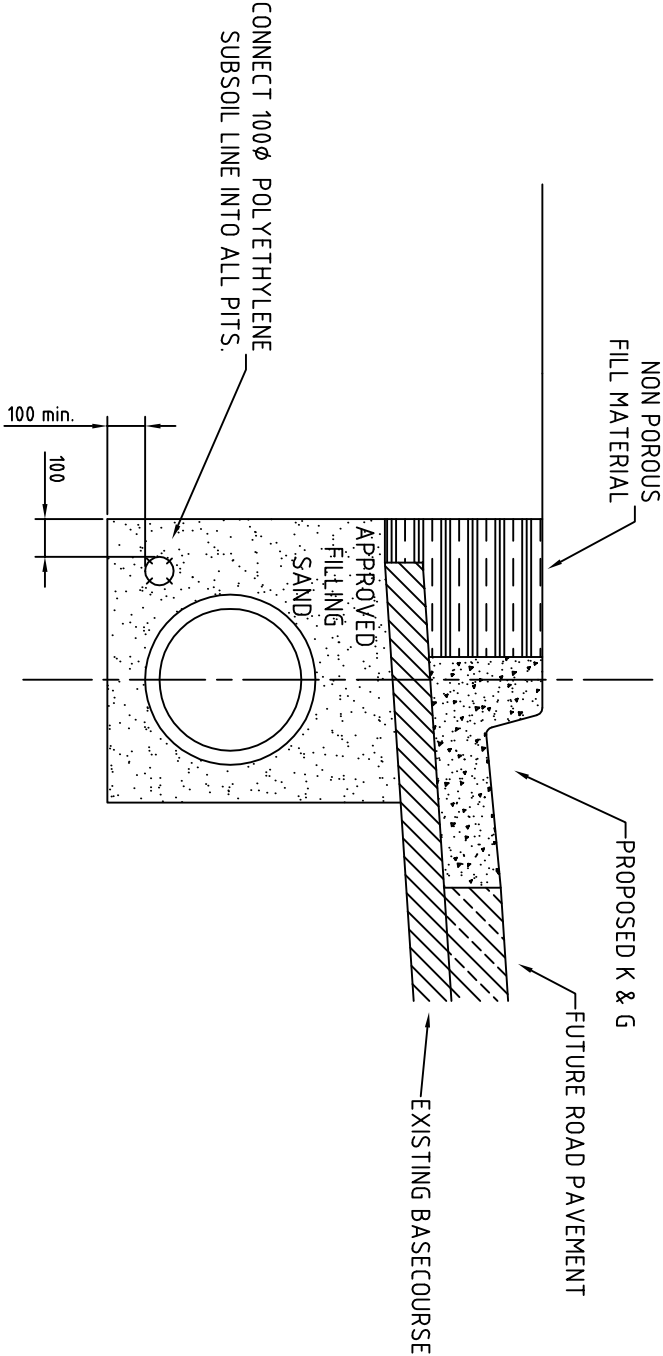
PROJECT		
STANDARD DETAILS		
DESCRIPTION		
STORMWATER KERB INLET PIT CONFIGURATION		
DWG NO.	PAGE NO.	REVISION NO.
WBC009		C

NOTES:

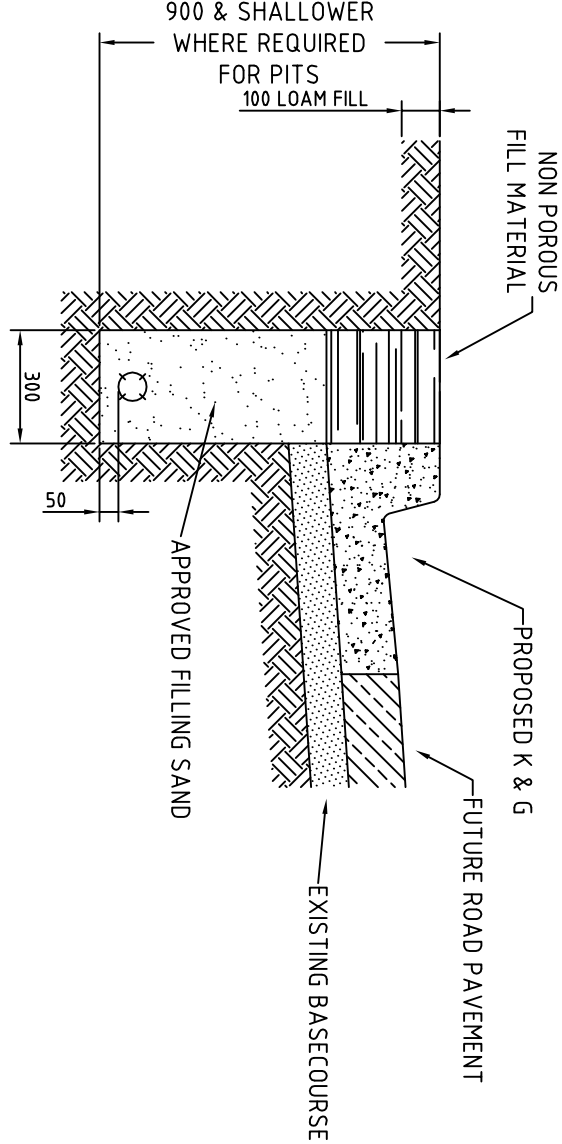
- 1. COMPACTION OF TRENCHES SHALL BE 250mm MAX. THICK LAYERS TO A MINIMUM 95% STANDARD DRY DENSITY. (100% REQUIRED UNDER ROADWAYS)
- 2. USE COMPACTED 27:1 (SAND:CEMENT) AS APPROVED SAND FILLING WHEN CROSSING EXISTING ROADS
- 3. MINIMUM TRENCH WIDTH 600mm
- 4. ALL MEASUREMENTS ARE IN MILLIMETRES



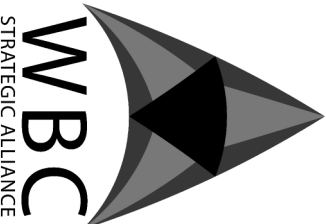
CASE No.1  
PIPES IN ROADWAYS



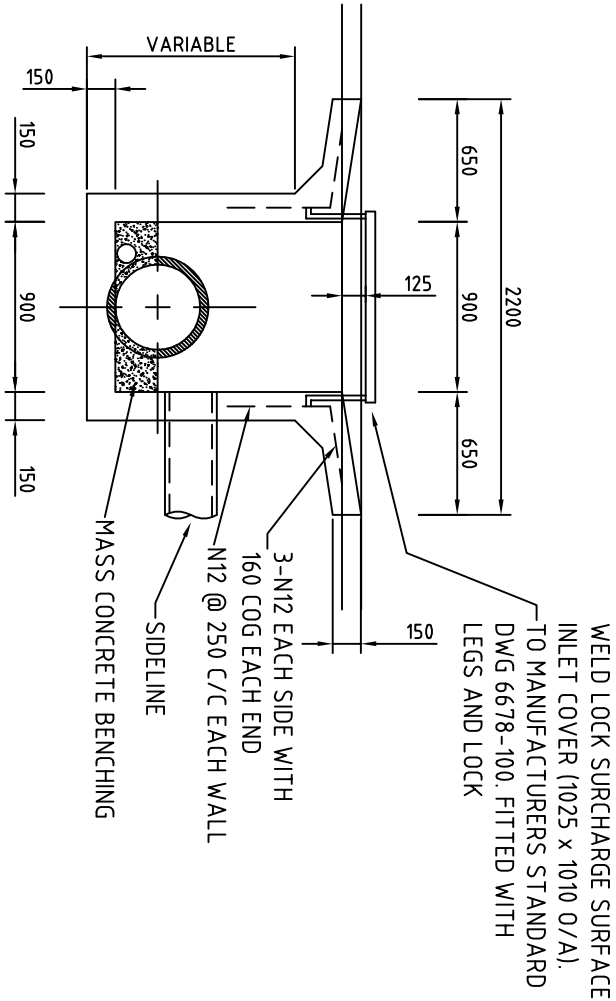
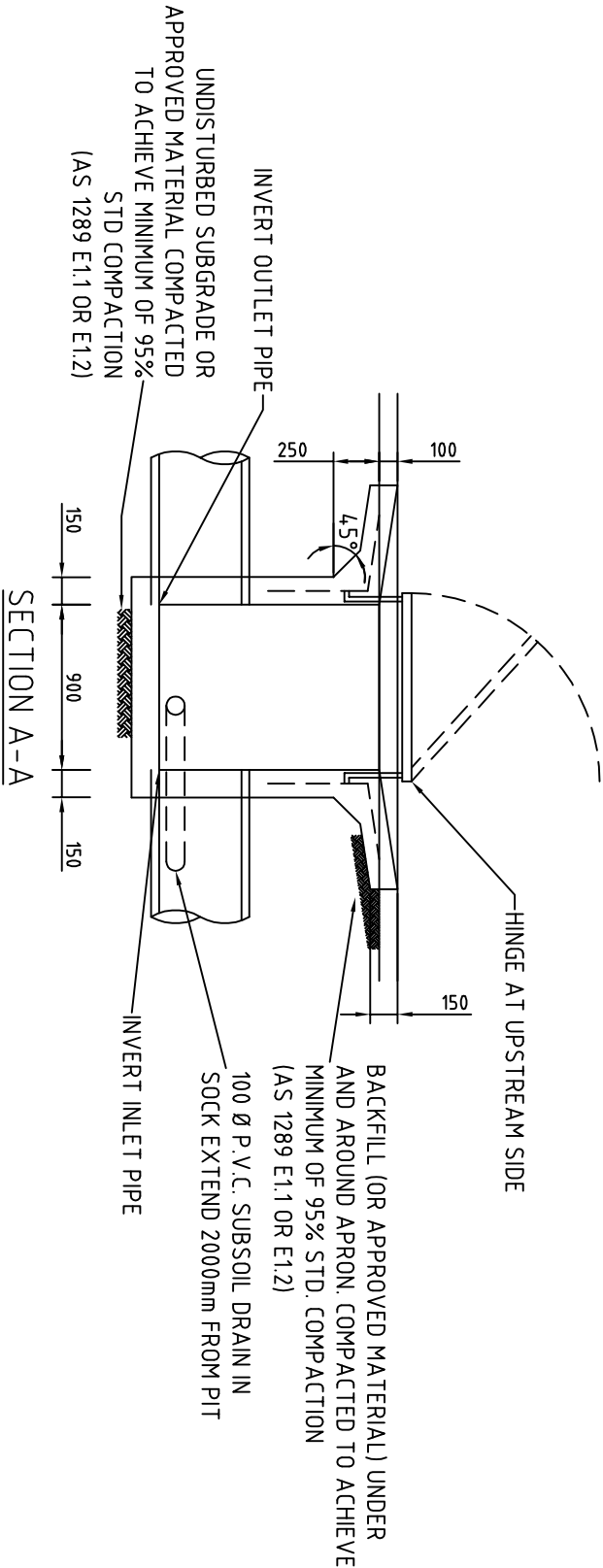
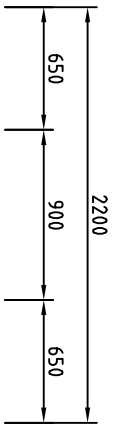
CASE No.2  
PIPES IN FOOTPATHS



CASE No.3  
SUBSOIL LINES IN FOOTPATHS

REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	<div></div> <div>STANDARD DETAILS</div> <div>STORMWATER PIPE BEDDING</div>		
B	APPROVED FOR USE	GSB	03/07/09			
REV.				PROJECT		
				STANDARD DETAILS		
				STORMWATER PIPE BEDDING		
DWG NO.		PAGE NO.		REVISION NO.		
WBC010				B		

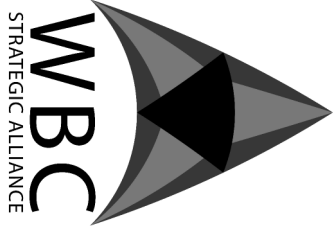




SECTION B-B

- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES
  2. ALL CONCRETE TO BE 20MPa
  3. PROVIDE CORROSION RESISTANT STEP IRONS SPACED AT 300 C/C FOR PITS GREATER THAN 1.2m DEEP
  4. PITS GREATER THAN 1.8m DEEP TO HAVE 200 THICK WALLS AND BASE, WITH SN82 MESH OR N12 @ 200 C/C, WITH 300 MIN LAP

REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09

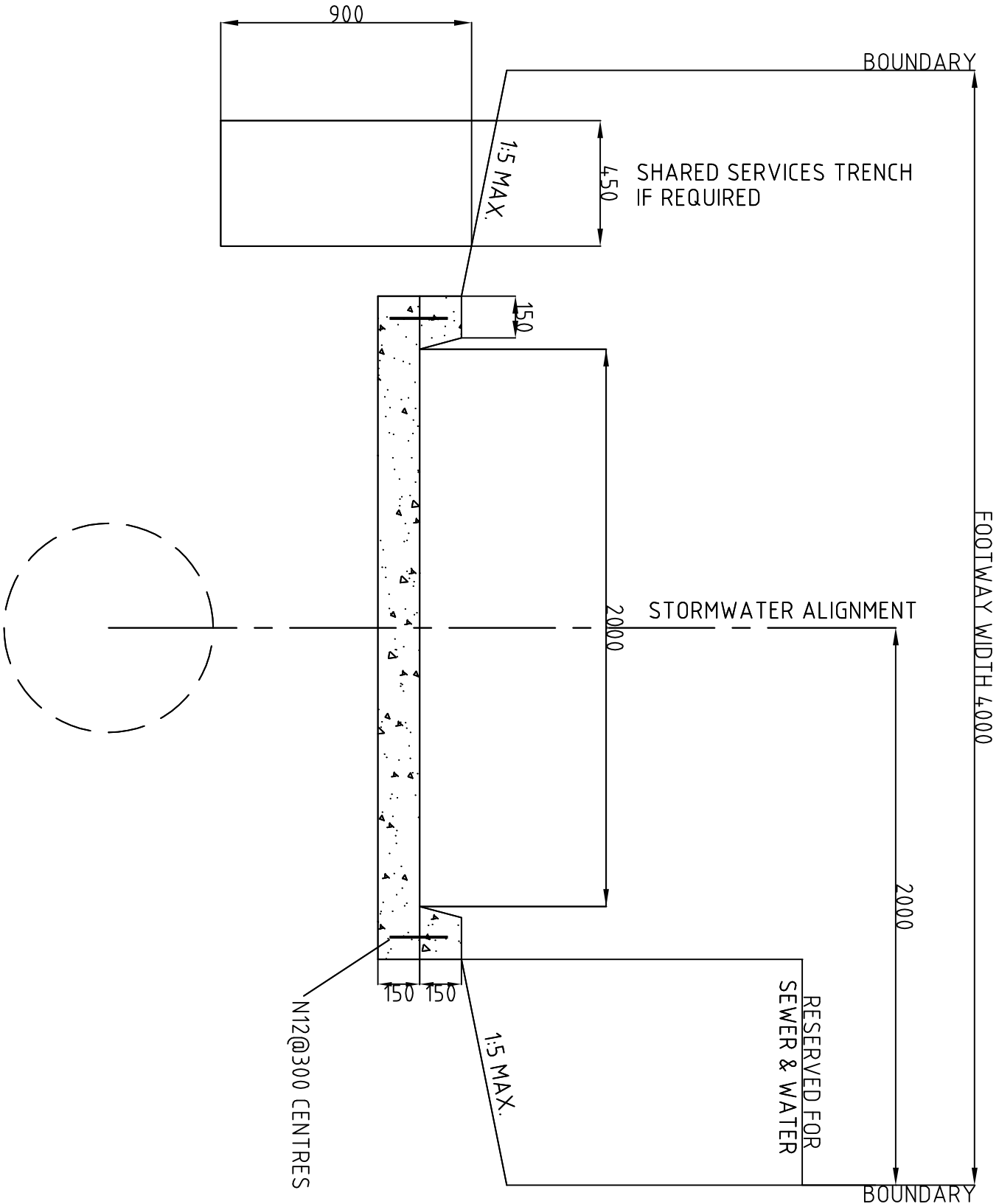


PROJECT		
STANDARD DETAILS		
DESCRIPTION		
STORMWATER SURFACE/SURCHARGE PIT		
DWG NO.	PAGE NO.	REVISION NO.
WBC012		B



NOTES:

- 1. ALL DIMENSIONS IN MILLIMETRES
- 2. ALL CONCRETE TO BE 20MPa

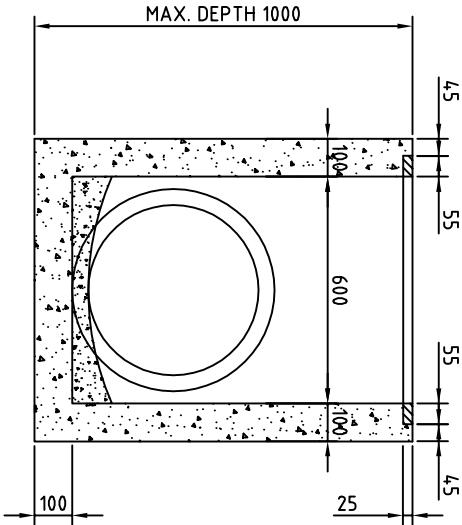
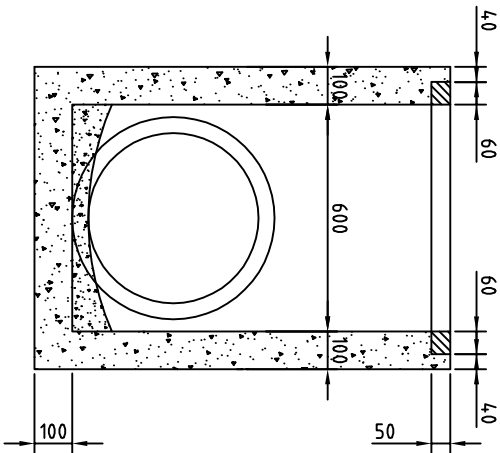
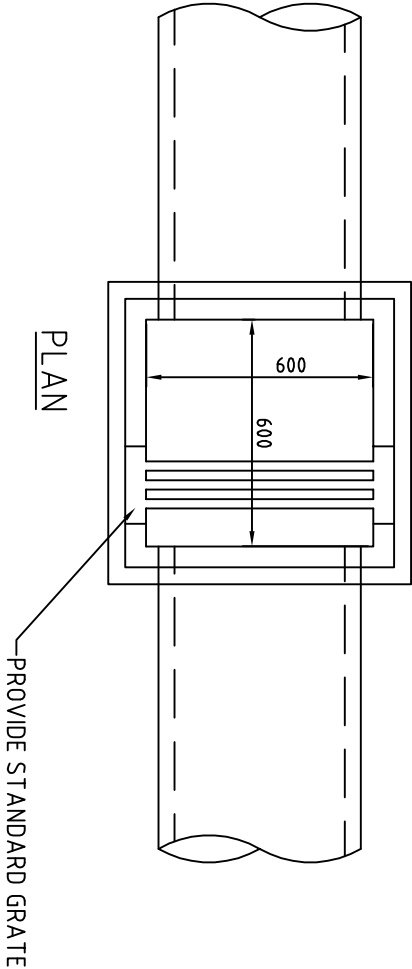
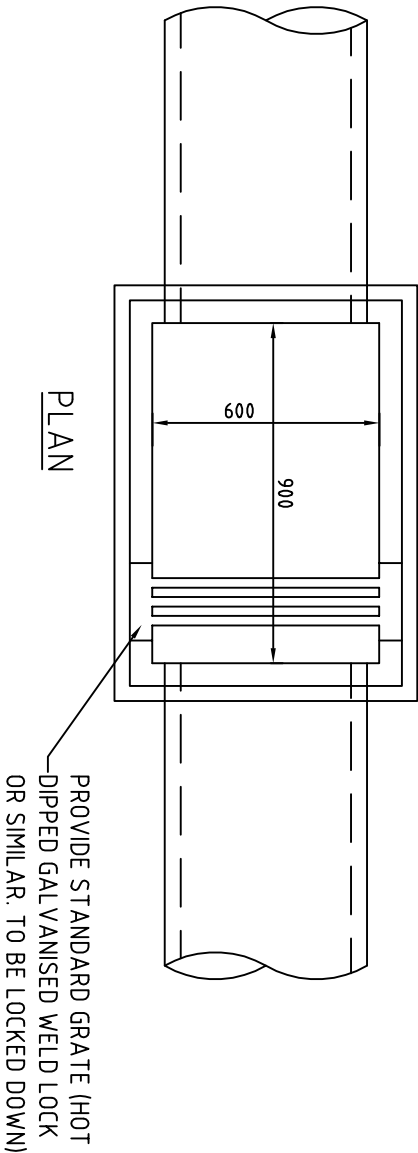


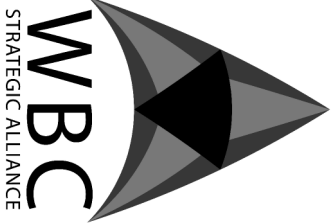
STANDARD FLOODWAY  
WITHIN PATHWAY ALIGNMENTS

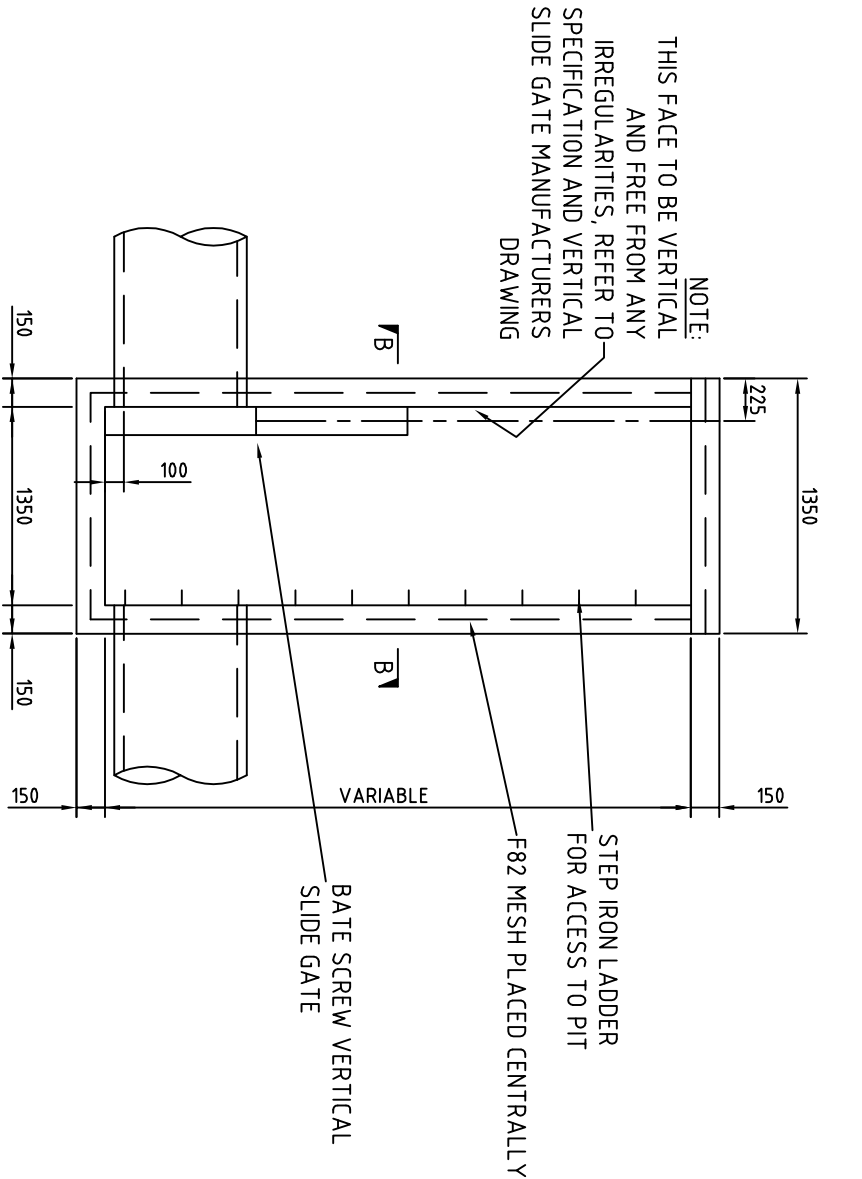
REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	STANDARD DETAILS		
B	APPROVED FOR USE	GSB	03/07/09			
				STORMWATER FLOODWAY WITHIN PATHWAY ALIGNMENTS		
				DWG NO.	PAGE NO.	REVISION NO.
				WBC014		B

NOTES:

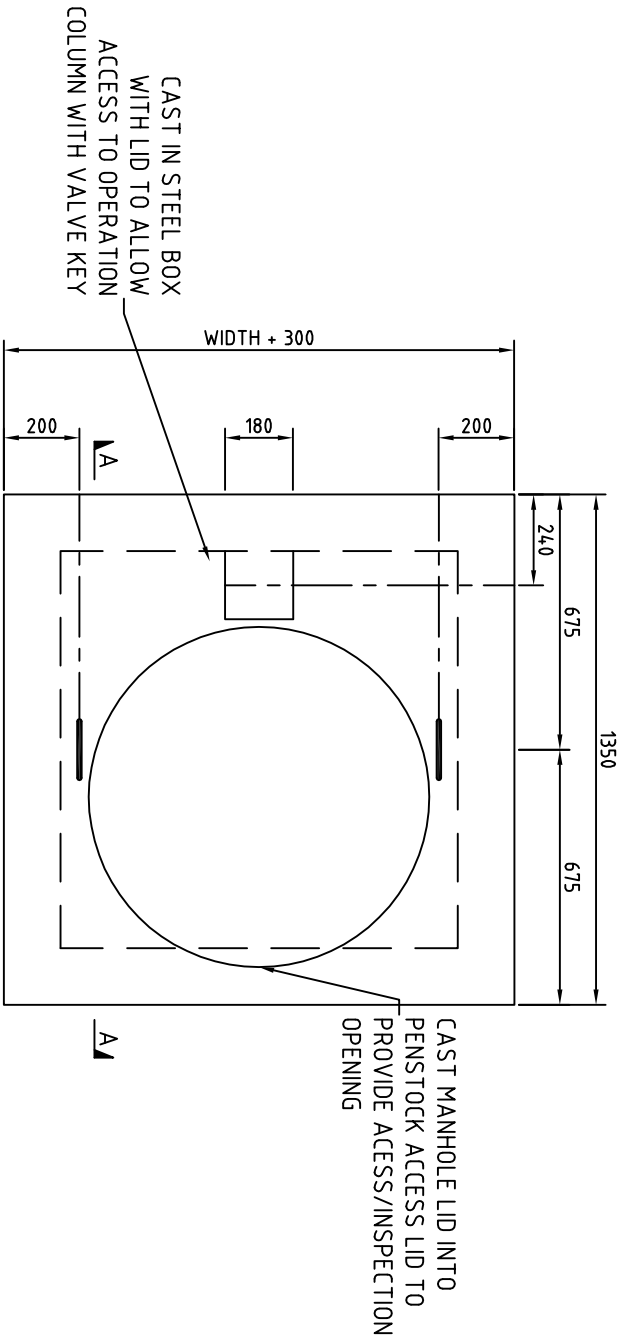
- 1. ALL DIMENSIONS IN MILLIMETRES
- 2. ALL CONCRETE TO BE 20MPa
- 3. ALL PIPES TO BE RUBBER RING JOINTED
- 4. TO BE LOCATED GENERALLY 1m FROM PROPERTY BOUNDARIES
- 5. LARGER PITS SHALL BE REQUIRED AS HYDRAULIC CONDITIONS DICTATE



REV.	DESCRIPTION	INITIALS	DATE	<div><div>PROJECTDESCRIPTIONSTANDARD DETAILS</div></div>		
A	ISSUED FOR COMMENT	NS	22/10/08			
B	APPROVED FOR USE	GSB	03/07/09			
				DWG NO. WBC015		
				PAGE NO.		
				REVISION NO. B		

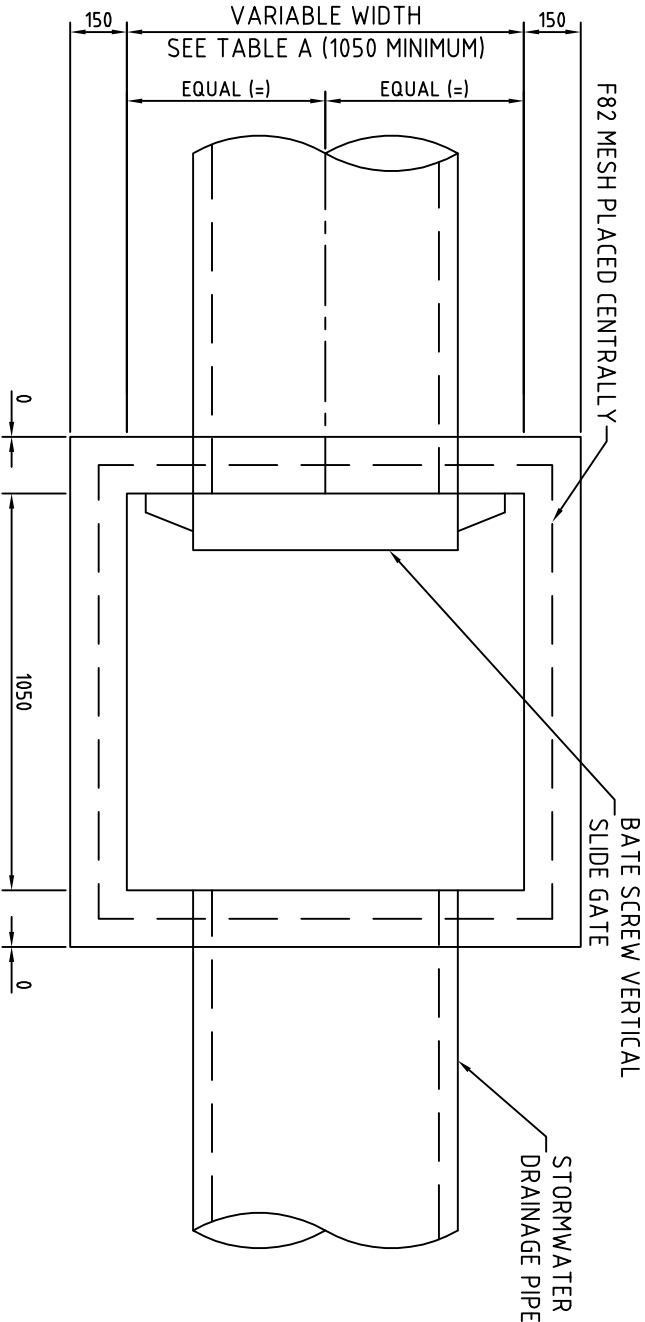


DIAMETER OF STORMWATER PIPE UP TO 600	WIDTH OF PIT
675	1050
750	1120
900	1190
1050	1370
1200	1550
1500	1700
	2050

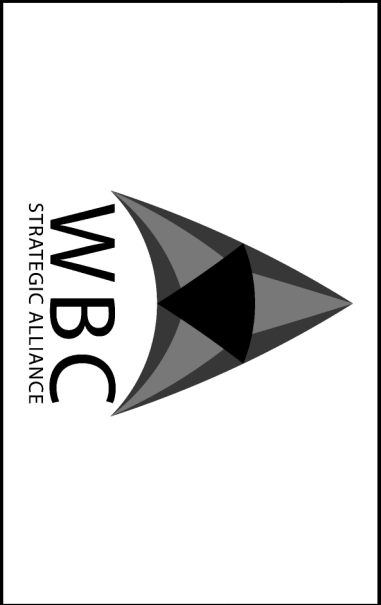


PLAN OF PENSTOCK (LID)

SCALE: 1:20

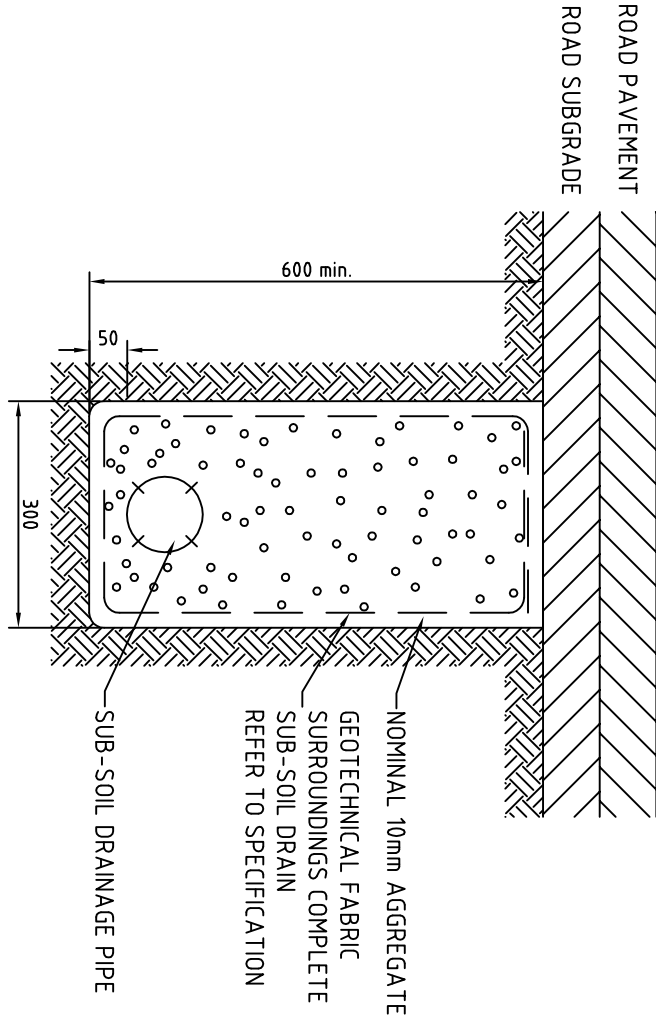
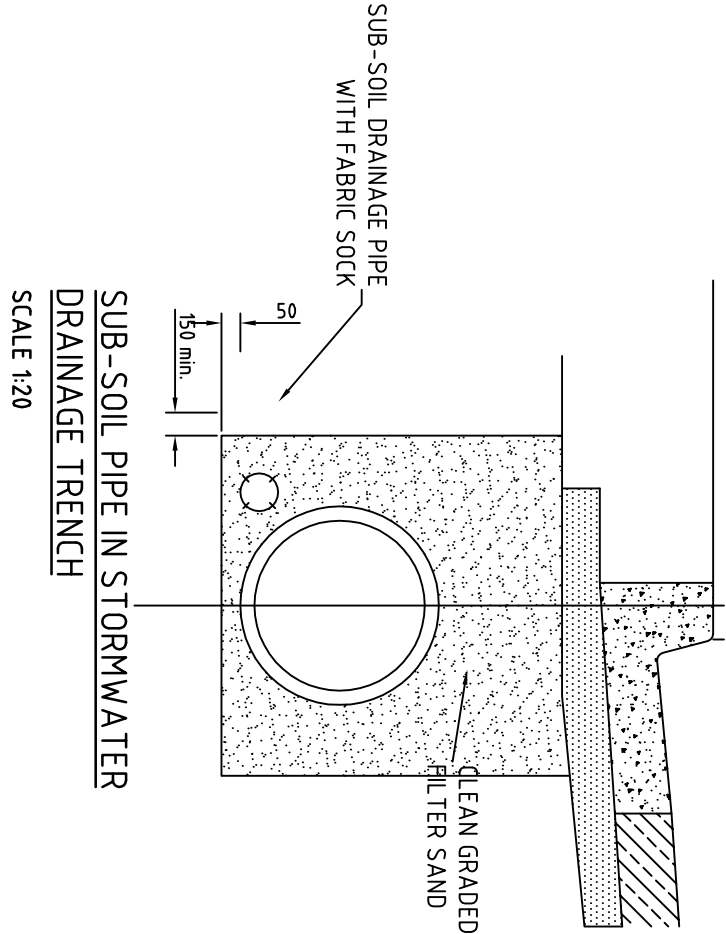


REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GGB	03/07/09

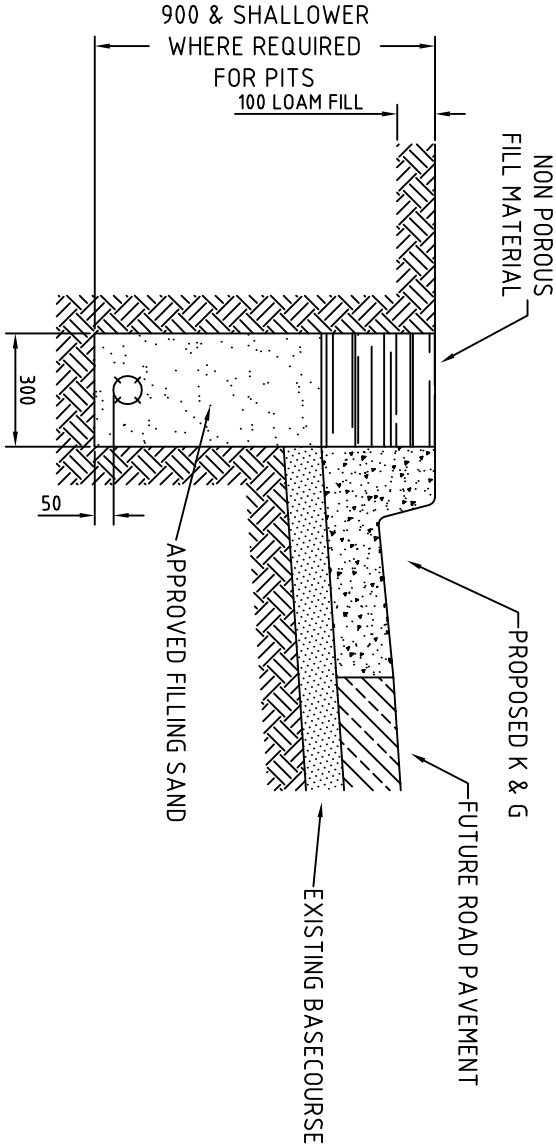
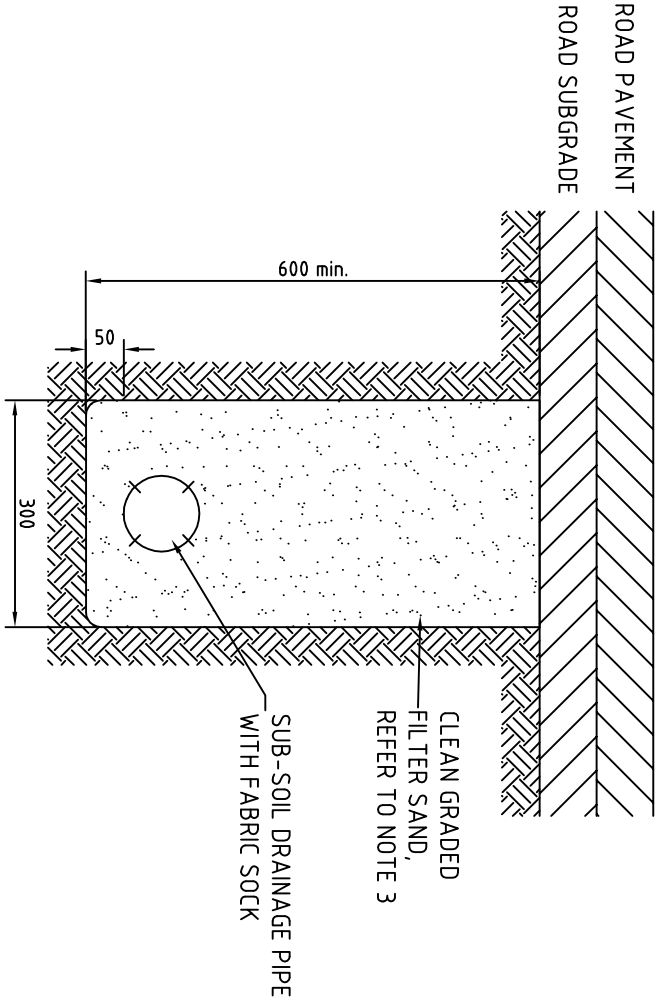


PROJECT	DESCRIPTION
STANDARD DETAILS	STORMWATER PENSTOCK/FLOODGATE PITS
DWG NO. WBC016	PAGE NO. REVISION NO. B





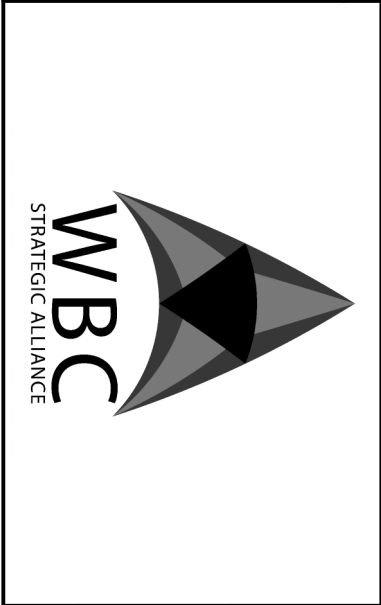
- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES
  2. SUBSOIL DRAINAGE FILTER DESIGN BASED UPON "SUBSURFACE DRAINAGE PROGRESS REPORT" SEPTEMBER 1979 PUBLISHED BY ARRB.
  3. TYPE 1 DRAIN COMPATIBLE WITH MOST INSITU MATERIALS EXCEPTING CLAYS WHERE MORE THAN 40% BY WEIGHT PASSES THE 13.5 MICRON SIEVE. TYPE 2 DRAINS SHALL BE CONSTRUCTED IN THIS CASE
  4. A NOMINAL AGGREGATE (10mm MAX) MAY BE SUBSTITUTED FOR FILTER SAND IN TYPE 1 WHEN THE DESIGN METHOD SHOWS THAT THE AGGREGATE IS COMPATIBLE WITH THE INSITU MATERIAL. THE FABRIC SOCK MAY BE OMITTED IN THESE CIRCUMSTANCES.



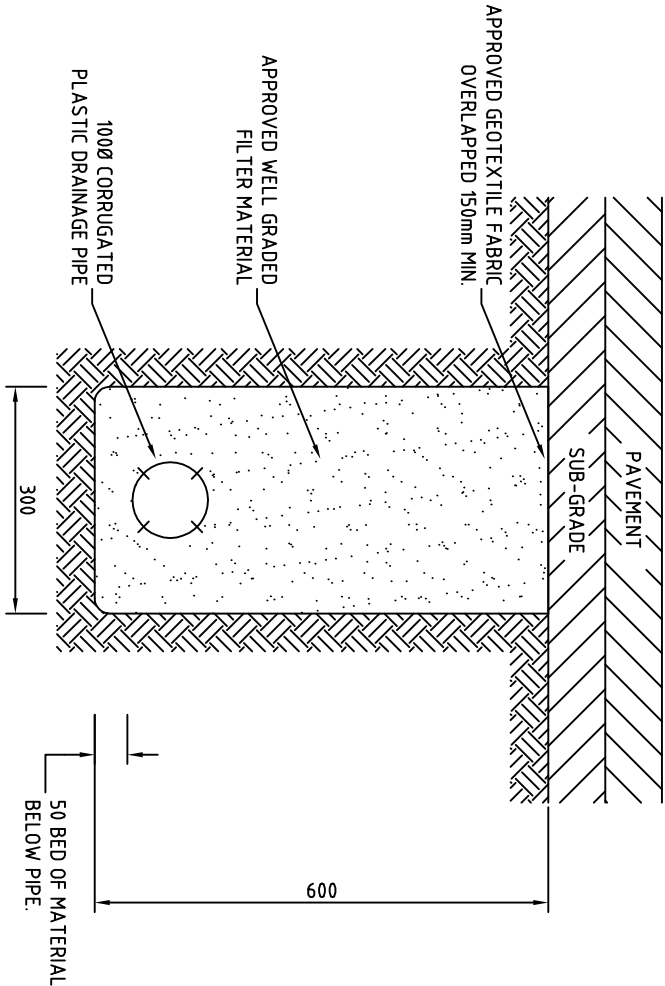
**SUB-SOIL DRAIN TYPE 1**  
SCALE 1:10

**SUB-SOIL DRAIN TYPE 3**  
SCALE 1:20

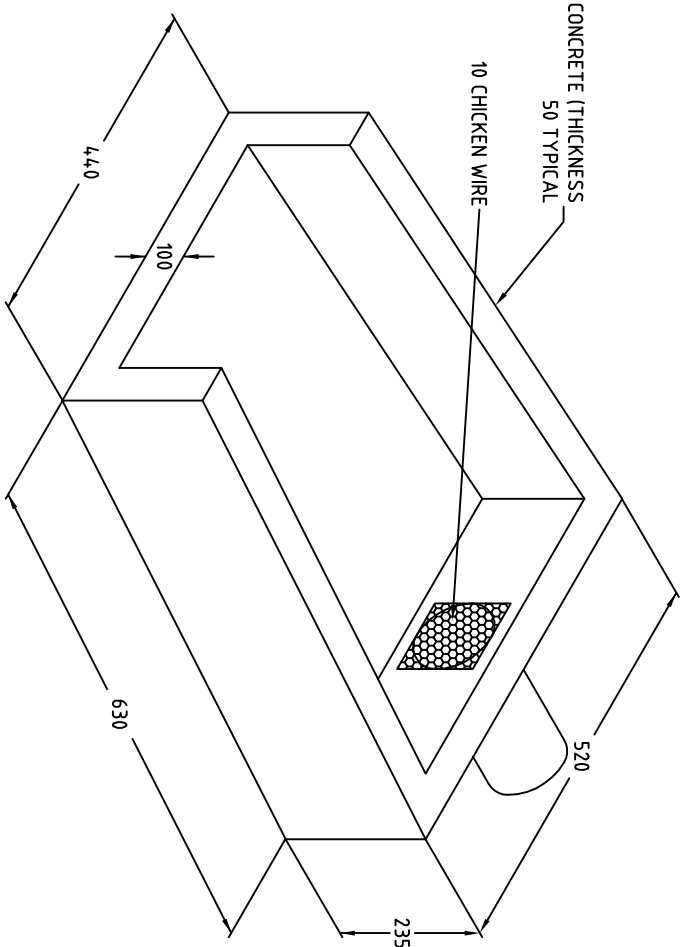
REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09



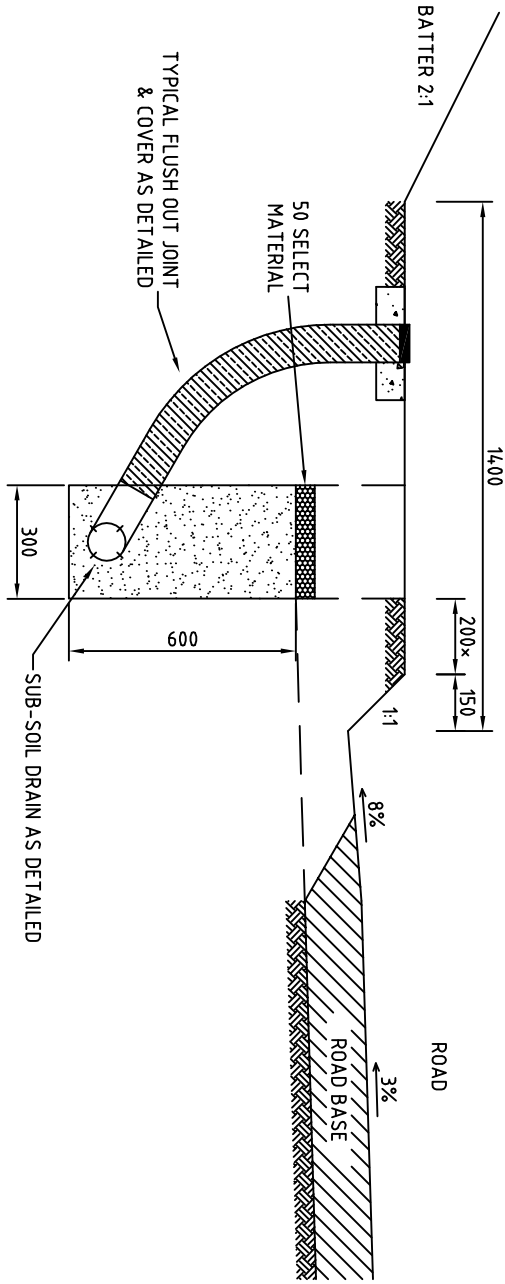
PROJECT	DESCRIPTION
STANDARD DETAILS	
STORMWATER	
SUBSOIL DRAINAGE LINES	
DWG NO.	WBC017
PAGE NO.	
REVISION NO.	B



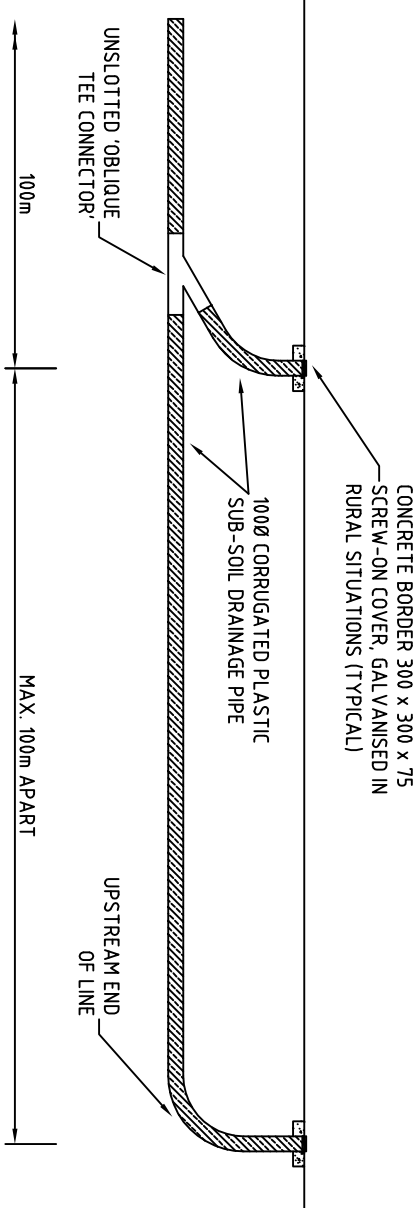
CROSS SECTION OF SUB-SOIL DRAIN



CONCRETE OUTLET STRUCTURE  
FOR BATTER CONDITIONS



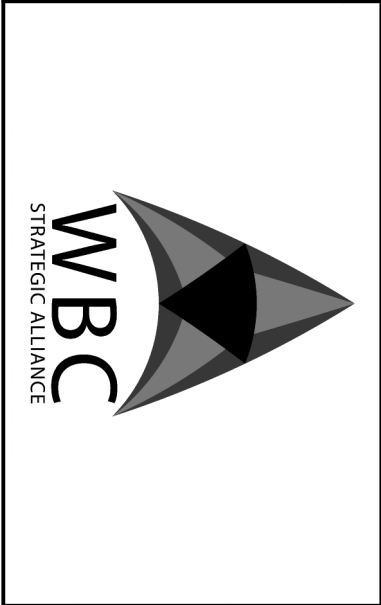
TYPICAL SECTION AT  
FLUSH OUT JOINT



TYPICAL FLUSH OUT POINT

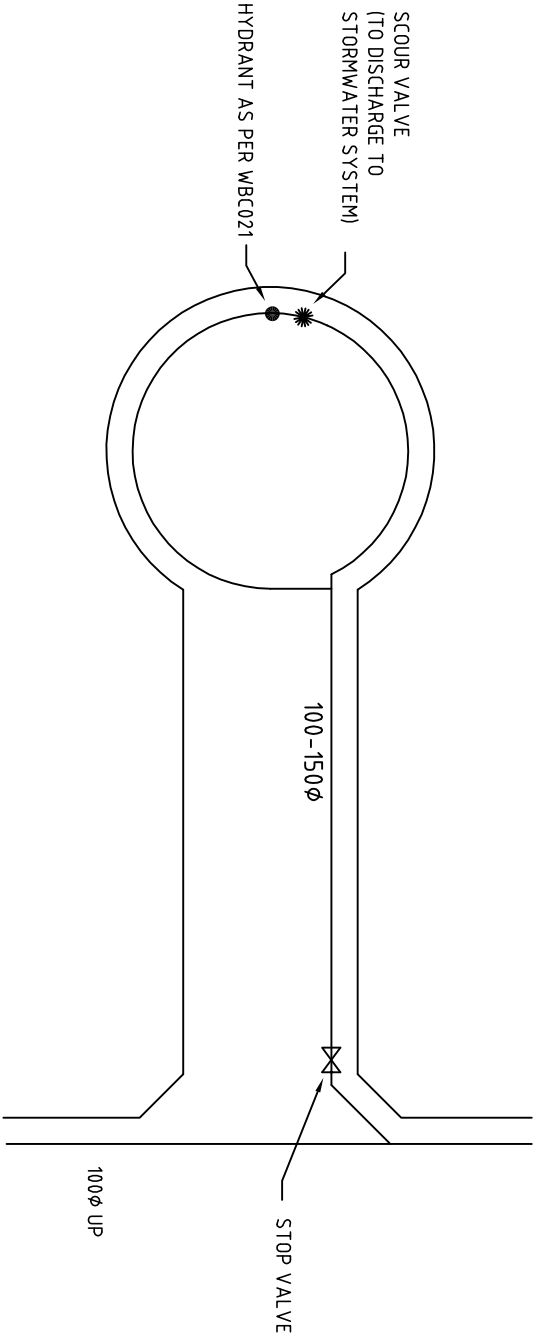
- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES
  2. FILTER MATERIAL TO BE WELL GRADED AGGREGATE WITH 95% PASSING A 20mm SIEVE AND AT LEAST 95% BEING RETAINED ON A 5mm SIEVE
  3. FLUSH OUT POINTS SHOULD BE A MAXIMUM OF 100m APART AND BE INSTALLED AT THE UPSTREAM END OF THE LINE.

REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09

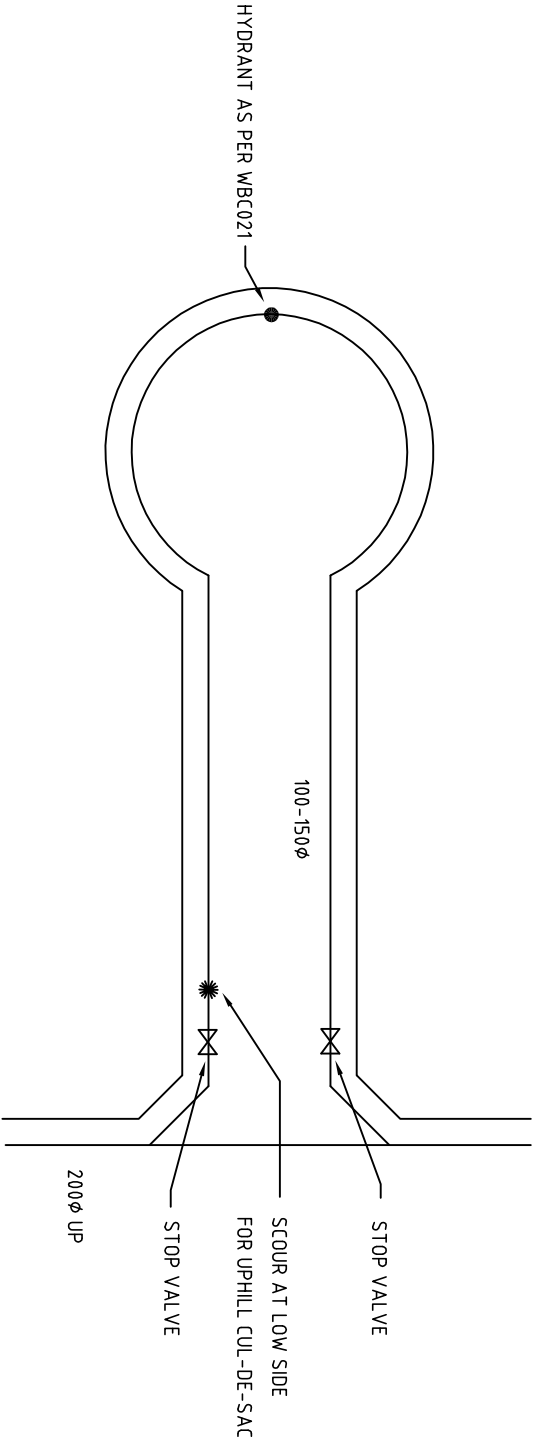


PROJECT		
STANDARD DETAILS		
DESCRIPTION		
STORMWATER		
SUBSOIL FLUSHOUT AND OUTLET STRUCTURES		
DWG NO.	PAGE NO.	REVISION NO.
WBC018		B

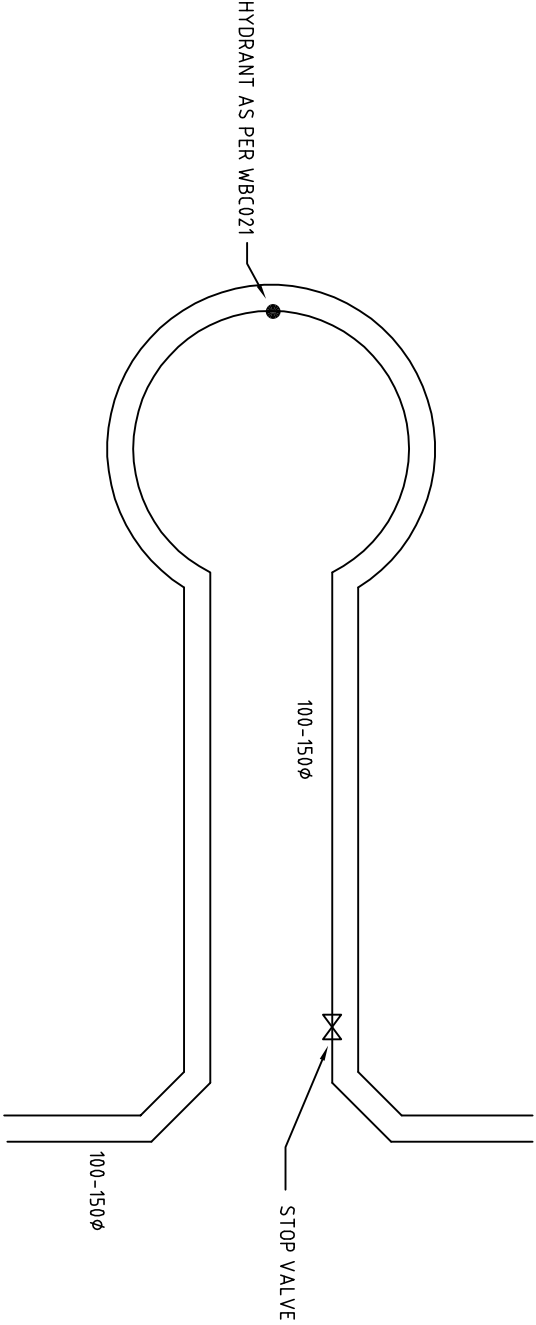
NOTES:



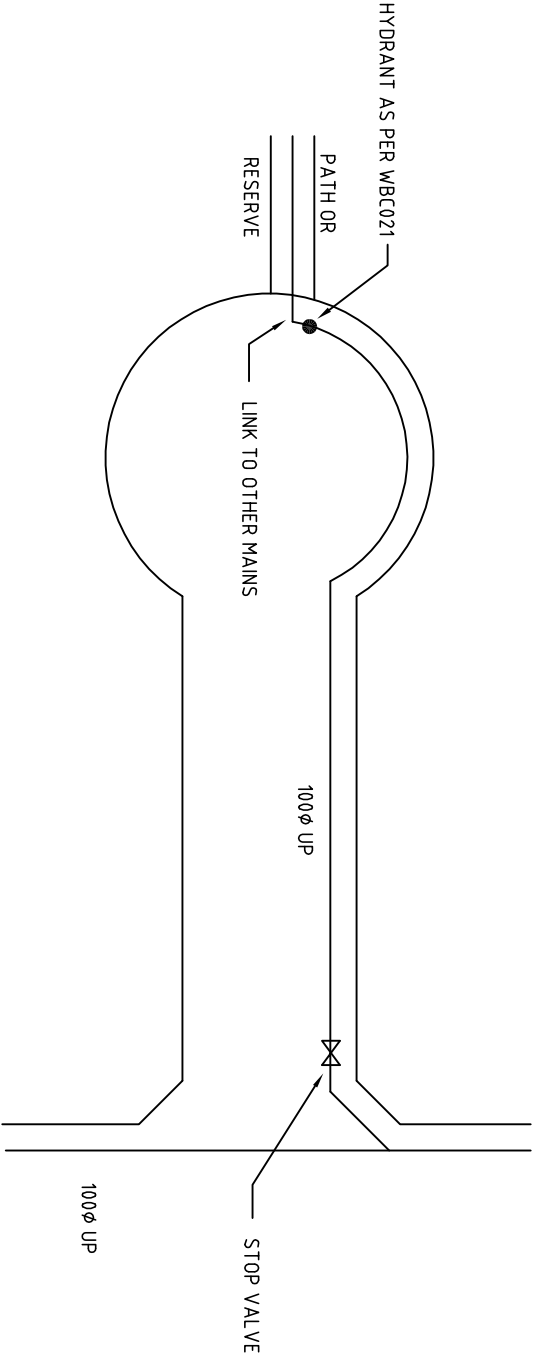
1. DOMESTIC RETICULATION OR MAJOR RING MAIN (>200mm Ø) IN STREET TO WHICH A DOWNHILL CUL-DE-SAC IS CONNECTED.



3. MAJOR RING MAIN (>200mm) IN STREET TO WHICH AN UPHILL CUL-DE-SAC IS CONNECTED.



2. DOMESTIC RETICULATION IN STREET TO WHICH AN UPHILL CUL-DE-SAC IS CONNECTED.

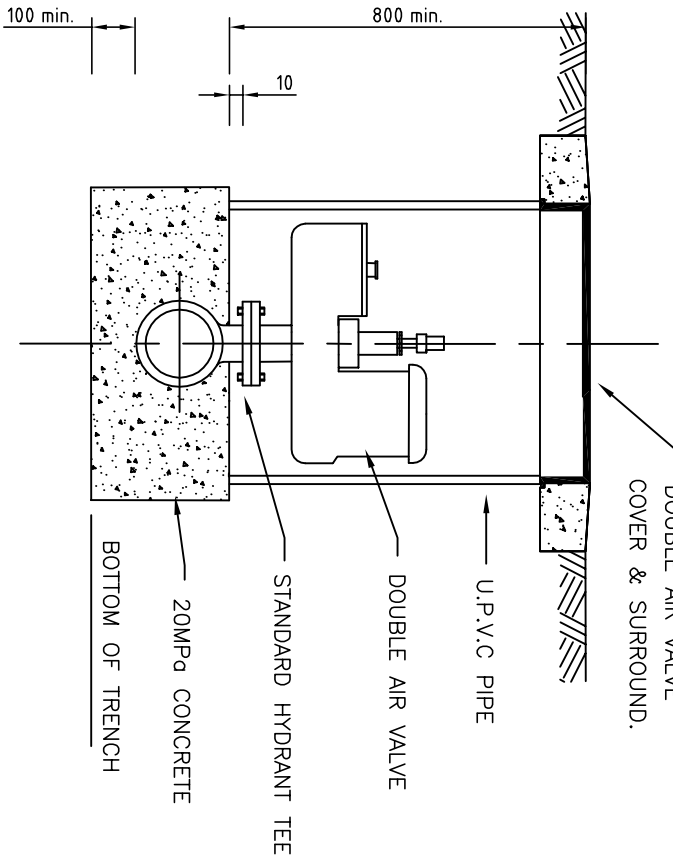
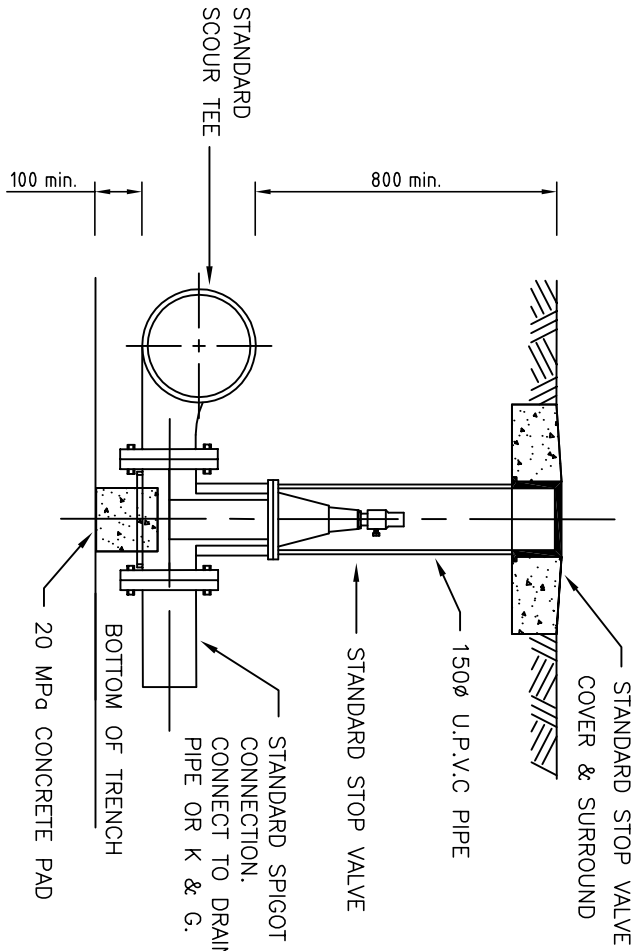


4. WHERE PATH OR RESERVE ALLOWS LINK TO OTHER MAINS

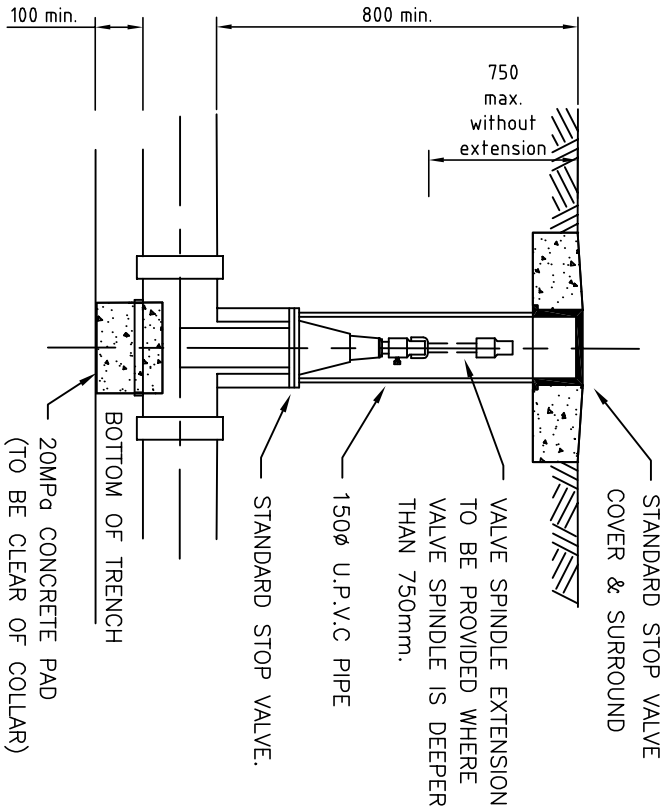
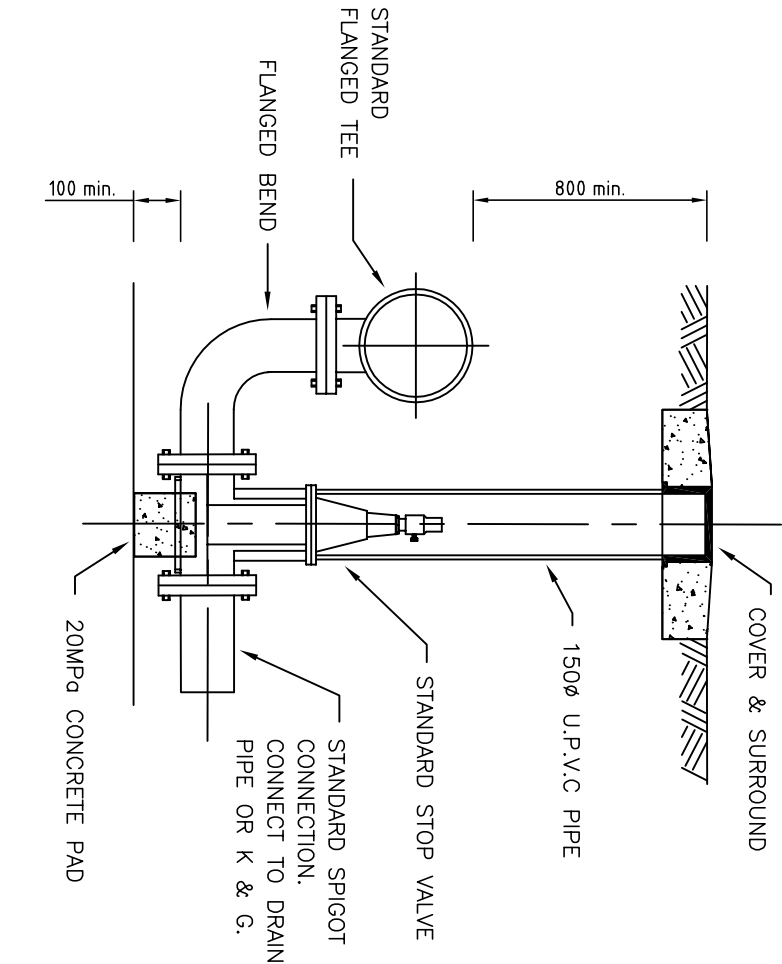
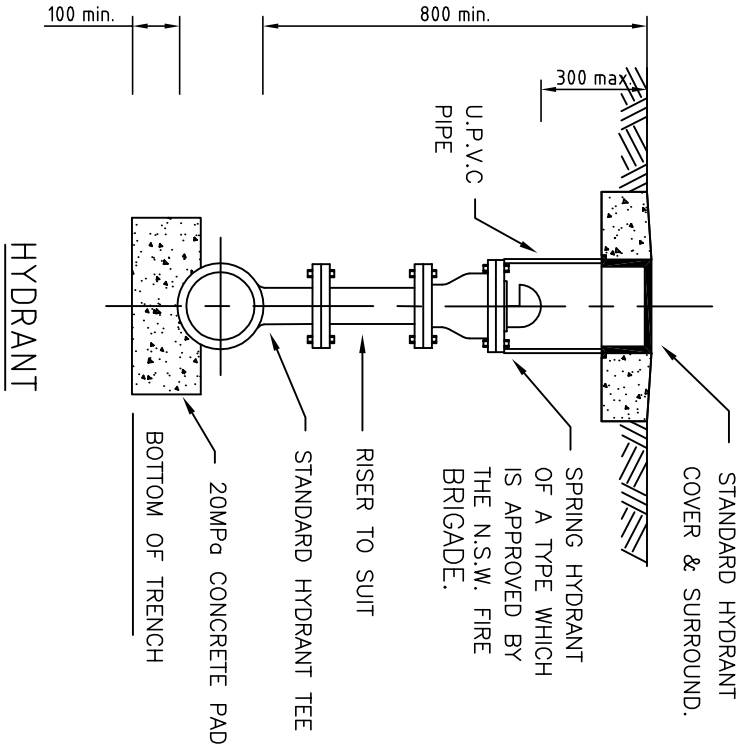
REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	<div>WBC STRATEGIC ALLIANCE</div> <div>STANDARD DETAILS</div> <div>WATER</div> <div>RETICULATION ALIGNMENT FOR CUL-DE-SACs</div>		
B	APPROVED FOR USE	GSB	03/07/09			
PROJECT				DESCRIPTION		
				DWG NO. WBC019		
				PAGE NO.		
				REVISION NO. B		

NOTES:

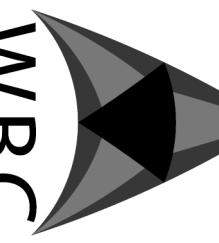
- 1. VALVES TO BE ANTI-CLOCKWISE CLOSING.
- 2. CENTRAL TABLELANDS WATER VALVES TO BE CLOCKWISE CLOSING.
- 3. CONCRETE TO BE KEPT CLEAR OF COUPLING AND NUTS ON FITTINGS.
- 4. VALVES TO BE TESTED TO 2.4MPa
- 5. FLANGES DRILLED TO TABLE "C"
- 6. VALVES TO HAVE PROTECTIVE POWDER COATING.



AIR VALVE



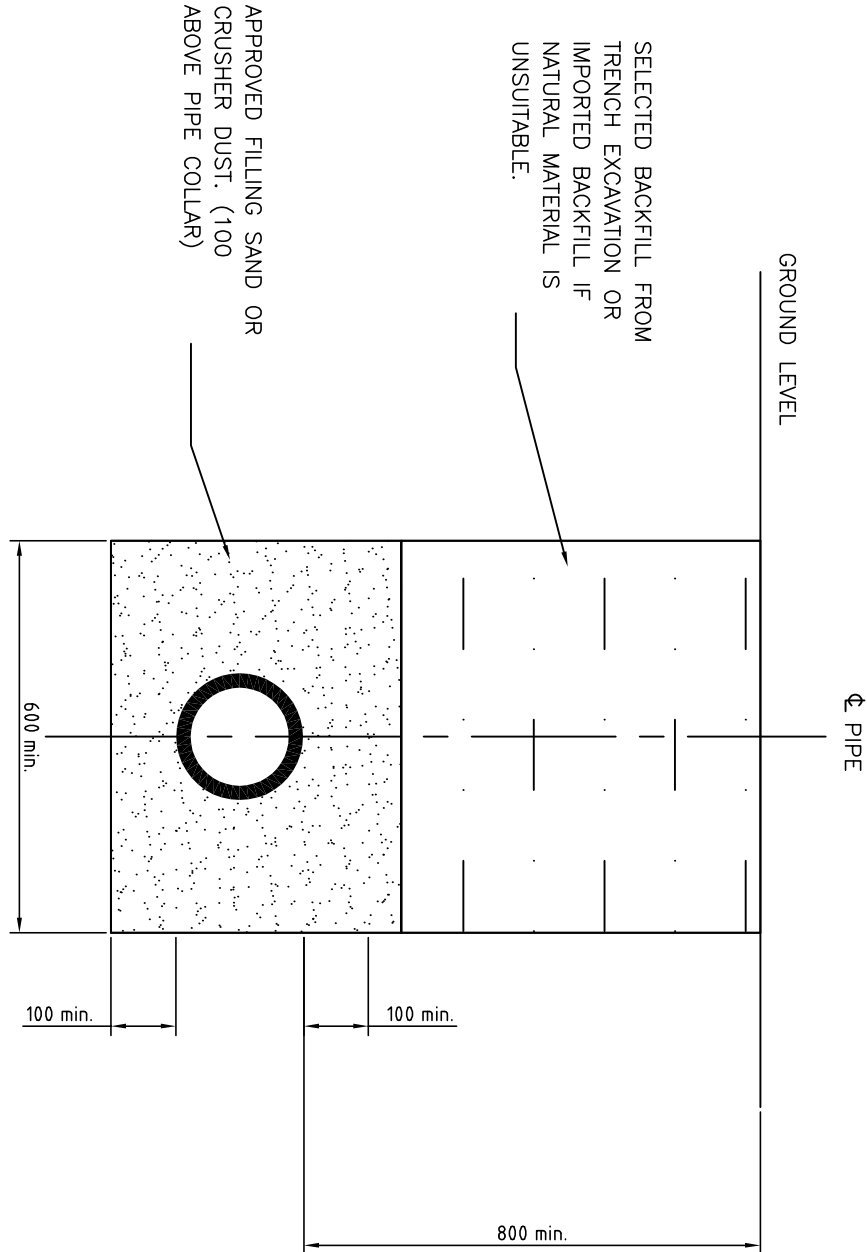
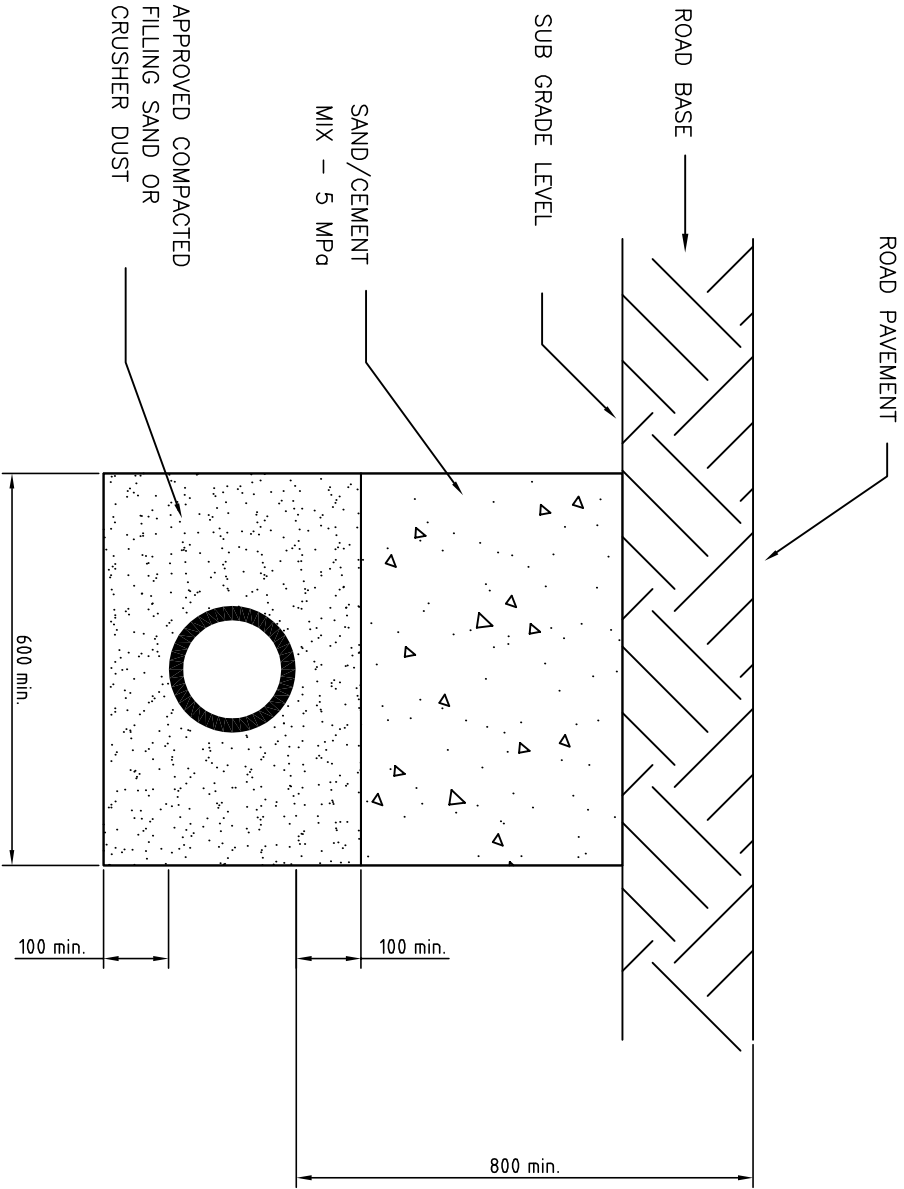
STOP VALVE

REV.	DESCRIPTION	INITIALS	DATE	<div><div>WBC</div><div>STRATEGIC ALLIANCE</div></div>
A	ISSUED FOR COMMENT	NS	22/10/08	
B	ISSUED FOR COMMENT	JC	24/2/09	
C	APPROVED FOR USE	GSB	03/07/09	
PROJECT				STANDARD DETAILS
DESCRIPTION				
WATER				
HYDRANTS AND VALVES				
DWG NO.		PAGE NO.	REVISION NO.	
WBC020			C	

STANDARD DETAILS

WATER  
HYDRANTS AND VALVES

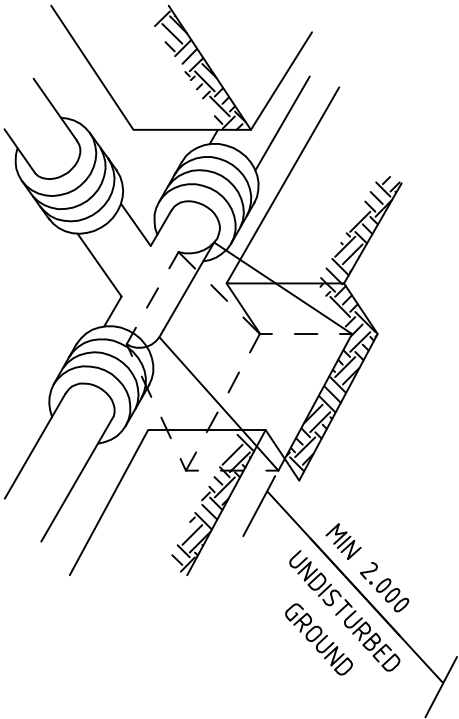
NOTES:



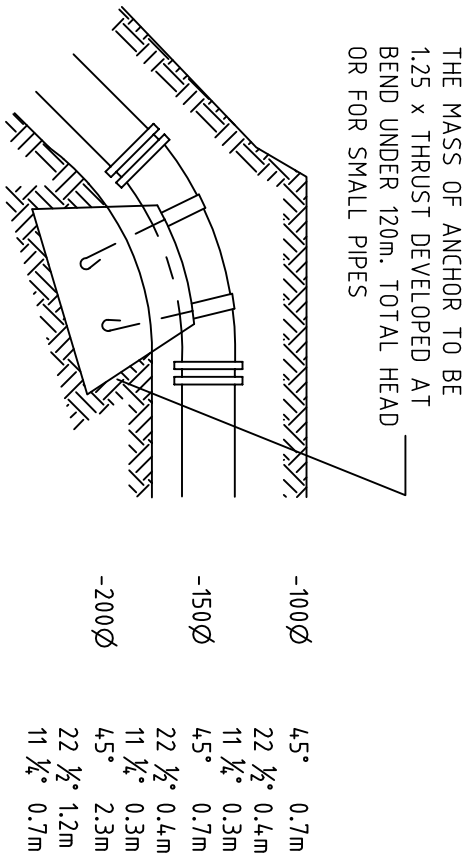
**CASE No. 1 – ROAD CROSSINGS**  
EXISTING ROADS ONLY  
UNDER ROAD PAVEMENT AND FOR 1m EACH  
SIDE OF ROADWAY IMMEDIATELY BEHIND  
KERB LINE.

**CASE No. 2 – ALL OTHER CONDITIONS**

REV.				DESCRIPTION		INITIALS		DATE	
A				ISSUED FOR COMMENT		NS		22/10/08	
B				ISSUED FOR COMMENT		JC		24/2/09	
C				APPROVED FOR USE		GSB		03/07/09	

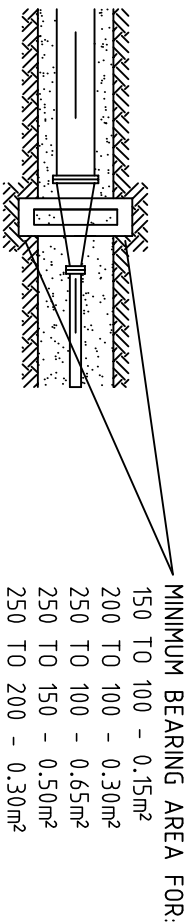


TYPICAL THRUST BLOCK BEHIND A TEE PIPE



TYPICAL ANCHORAGE OF BEND IN VERTICAL PLANE

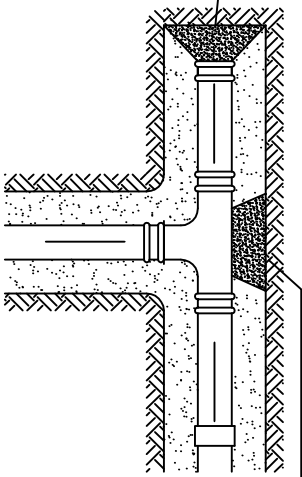
90° VERTICAL BENDS SHALL NOT BE USED WITHOUT THE RELEVANT COUNCIL'S APPROVAL, AND FLANGE FITTING WILL BE PERMITTED.



TYPICAL ANCHORAGE OF TAPER PIPE

MINIMUM BEARING AREA FOR

PIPE SIZE	MINIMUM BEARING AREA FOR
100Ø MAIN	- 0.2m²
150Ø MAIN	- 0.4m²
200Ø MAIN	- 0.6m²

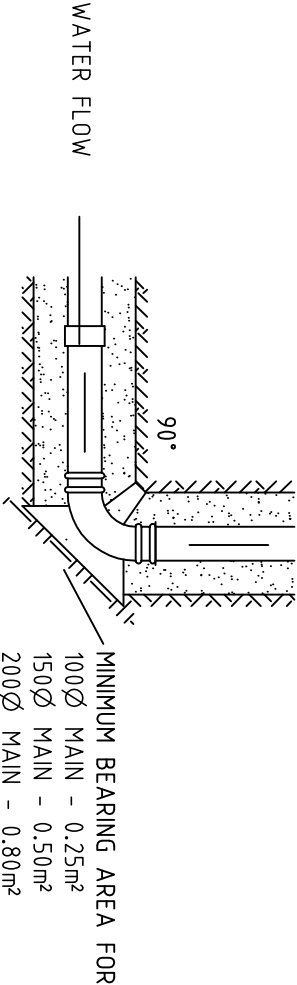
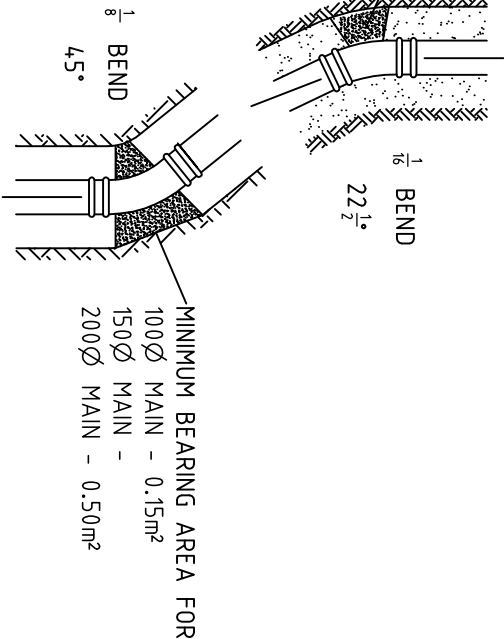


MINIMUM BEARING AREA FOR

PIPE SIZE	MINIMUM BEARING AREA FOR
100Ø MAIN	- 0.2m²
150Ø MAIN	- 0.4m²
200Ø MAIN	- 0.6m²

MINIMUM BEARING AREA FOR

PIPE SIZE	MINIMUM BEARING AREA FOR
100Ø MAIN	- 0.1m²
150Ø MAIN	- 0.2m²
200Ø MAIN	- 0.3m²

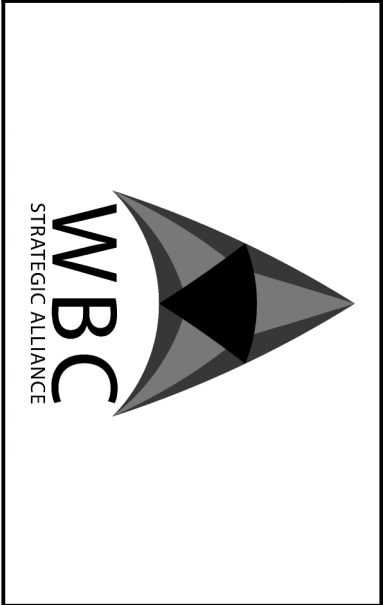


TYPICAL LOCATION OF THRUST BLOCK

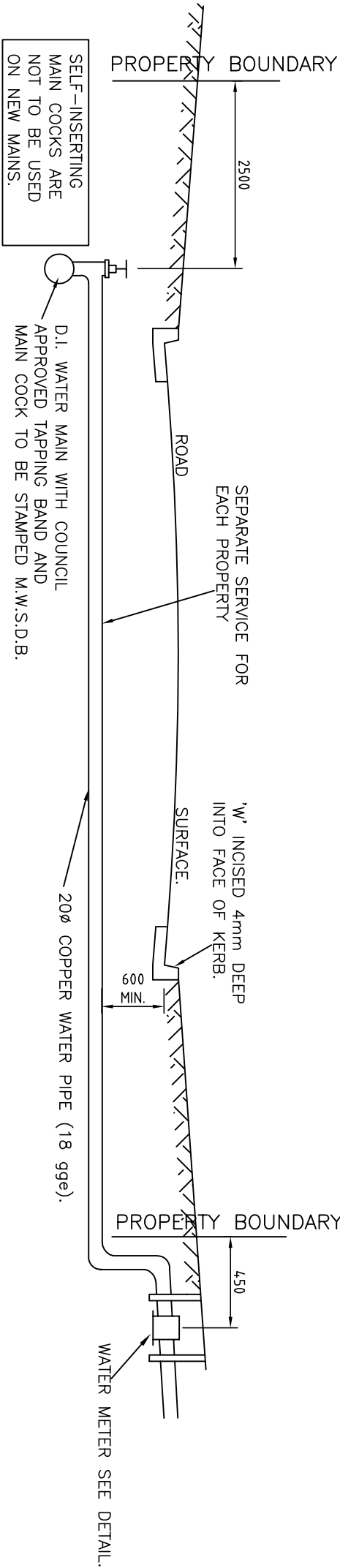
NOTES:

1. MINIMUM BEARING AREAS STATED REFER TO BEARING AGAINST UNDISTURBED SOLID NATURAL GROUND THAT MUST CONTINUE FOR 2m MINIMUM FROM THE FACE OF THE THRUST BLOCK.
2. THRUST BLOCKS AND ANCHORAGES FOR MAINS LARGER THAN 200mm AND FOR UNSTABLE GROUND TO BE DESIGNED BY A PRACTISING STRUCTURAL ENGINEER.
3. CONCRETE SHALL BE 20MPa.

REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	ISSUED FOR COMMENT	JC	24/2/09
C	APPROVED FOR USE	GSB	03/07/09

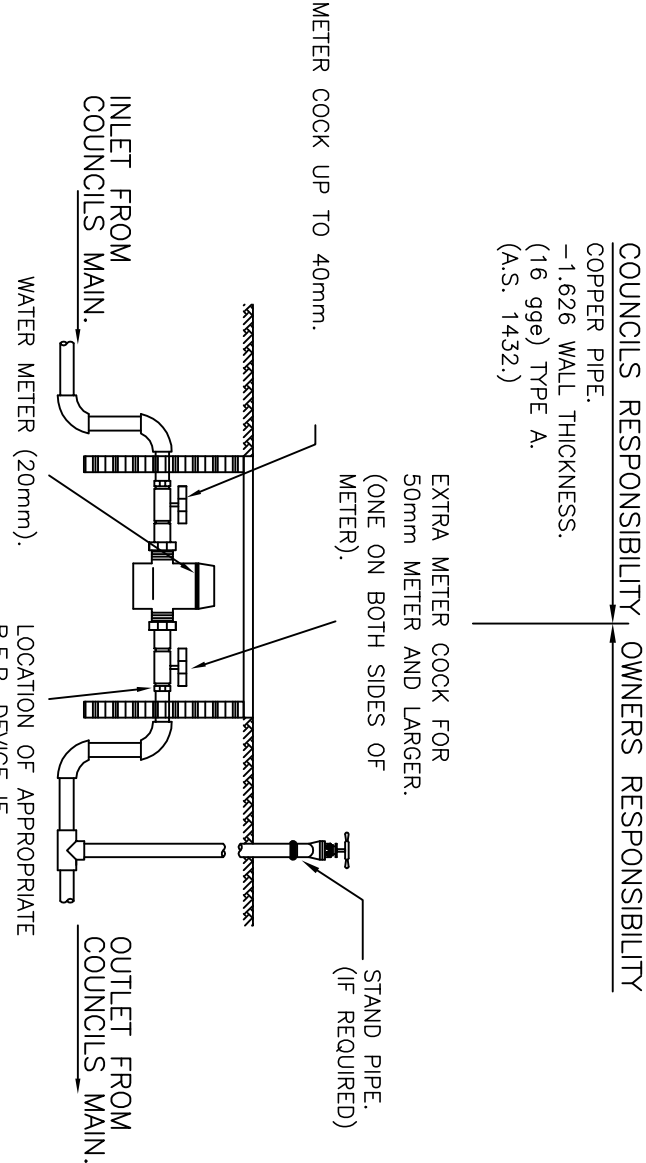
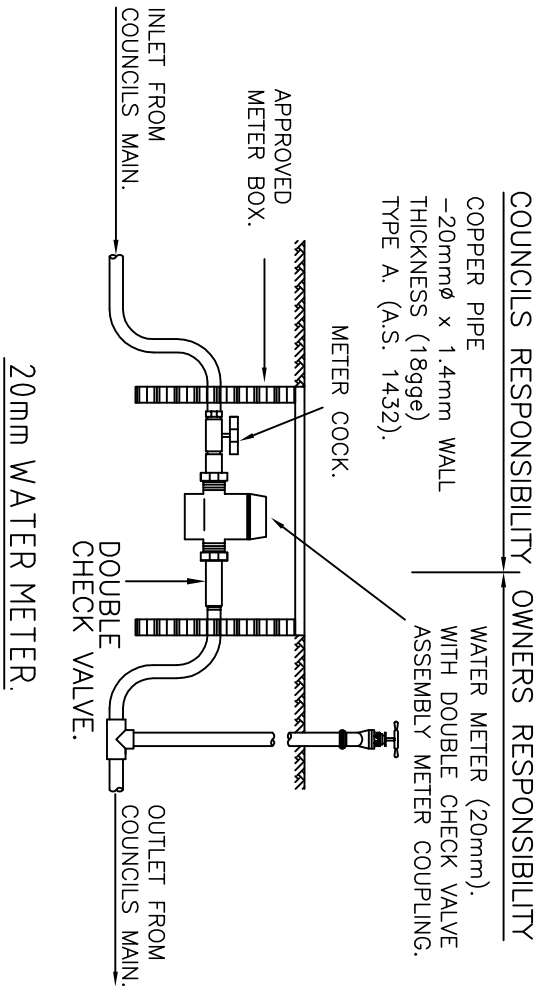


PROJECT	DESCRIPTION
STANDARD DETAILS	WATER
THRUST BLOCK LOCATIONS	
DWG NO. WBC022	PAGE NO. REVISION NO. C

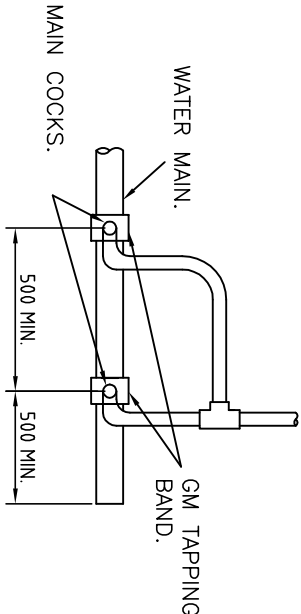


TYPICAL SERVICE CROSSING.

- NOTES:
- WHERE MAINS SHUTDOWN IS CONVENIENT, A HYDRANT TEE WITH DRILLED BLANKFLANGE ON 100mm AND 150mm MAINS IS TO BE CONSIDERED IN LIEU OF TAPPING FOR 40MM AND 50mm SERVICES.
  - METERS ARE GENERALLY TO BE LOCATED 450mm FROM PROPERTY SIDE AND FRONT BOUNDARIES..
  - SILVER SOLDERING OR BRAZING IS NOT TO BE USED ON COUNCIL'S SIDE OF THE WATER METER.
  - ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH AS3500 AND RELEVANT NSW CODES OF PRACTISE.



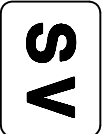
- STANDARD TAPPING SIZES
- 20mm Ø SERVICES - ONE 25mm TAPPING
  - 25mm Ø SERVICES - ONE 25mm TAPPING
  - 32mm Ø SERVICES - ONE 25mm TAPPING
  - 40mm Ø SERVICES - TWO 25mm TAPPINGS
  - 50mm Ø SERVICES - THREE 25mm TAPPINGS



REV.	DESCRIPTION	INITIALS	DATE	<div><div><div><div><div></div></div><div>WBC</div><div>STRATEGIC ALLIANCE</div></div></div></div>		
A	ISSUED FOR COMMENT	NS	22/10/08	<div><div>PROJECT</div><div>DESCRIPTION</div><div>WATER</div><div>WATER METER CONNECTIONS 20mm - 50mm</div></div>		
B	ISSUED FOR COMMENT	JC	24/2/09			
C	APPROVED FOR USE	GSB	03/07/09			
				DWG NO. WBC023		
				PAGE NO.		
				REVISION NO. C		

NOTES:

- 1. INDICATOR POSTS USED IN RURAL RESIDENTIAL AREAS SHALL BE LOCATED AT THE PROPERTY ALIGNMENT OPPOSITE THE VALVE OR HYDRANT,
- 2. MARKER PLATES USED IN URBAN AREAS SHALL BE FIXED TO THE KERB ON THE SAME SIDE OF ROAD AS THE VALVE OR HYDRANT.
- 3. MARKER POST AND PLATE ABBREVIATIONS:
  - HP - HYDRANT PATH
  - HR - HYDRANT ROAD
  - SV - STOP VALVE
- 4. BLUE CATS EYES SHALL BE FIXED IN THE CENTRE OF THE ROADWAY OPPOSITE HYDRANT WITH ARROW POINTING IN DIRECTION OF HYDRANT. CATS EYES ARE TO HAVE REFLECTORS ON BOTH SIDES AS SHOWN.
- 4. HYDRANT COVERS TO BE PAINTED WHITE AND STOP VALVE COVERS PAINTED YELLOW.
- 5. FACE LID HINGES TOWARD TRAFFIC FLOW.



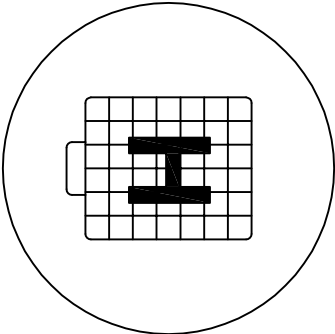
MARKER PLATES

TO BE USED IN URBAN AREAS WITH KERB AND GUTTER

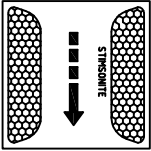
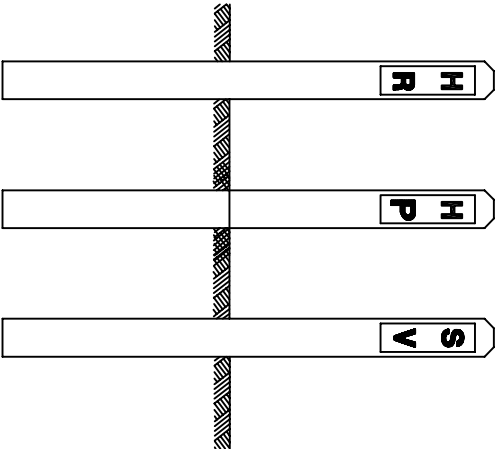


MARKER PLATES

TO BE USED ON KERBS BOTH SIDE OF ROAD FOR WATER MAIN ROAD CROSSINGS

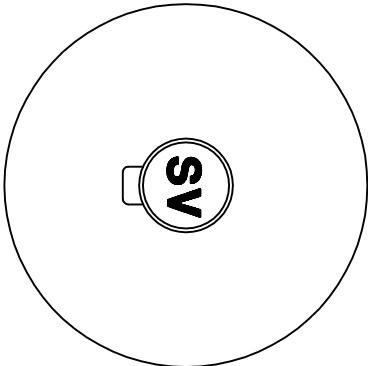


HYDRANT COVER



BLUE CATS EYES

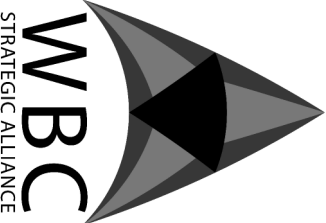
TO BE USED ON SEALED ROADS OPPOSITE HYDRANTS



STOP VALVE COVER

INDICATOR POSTS

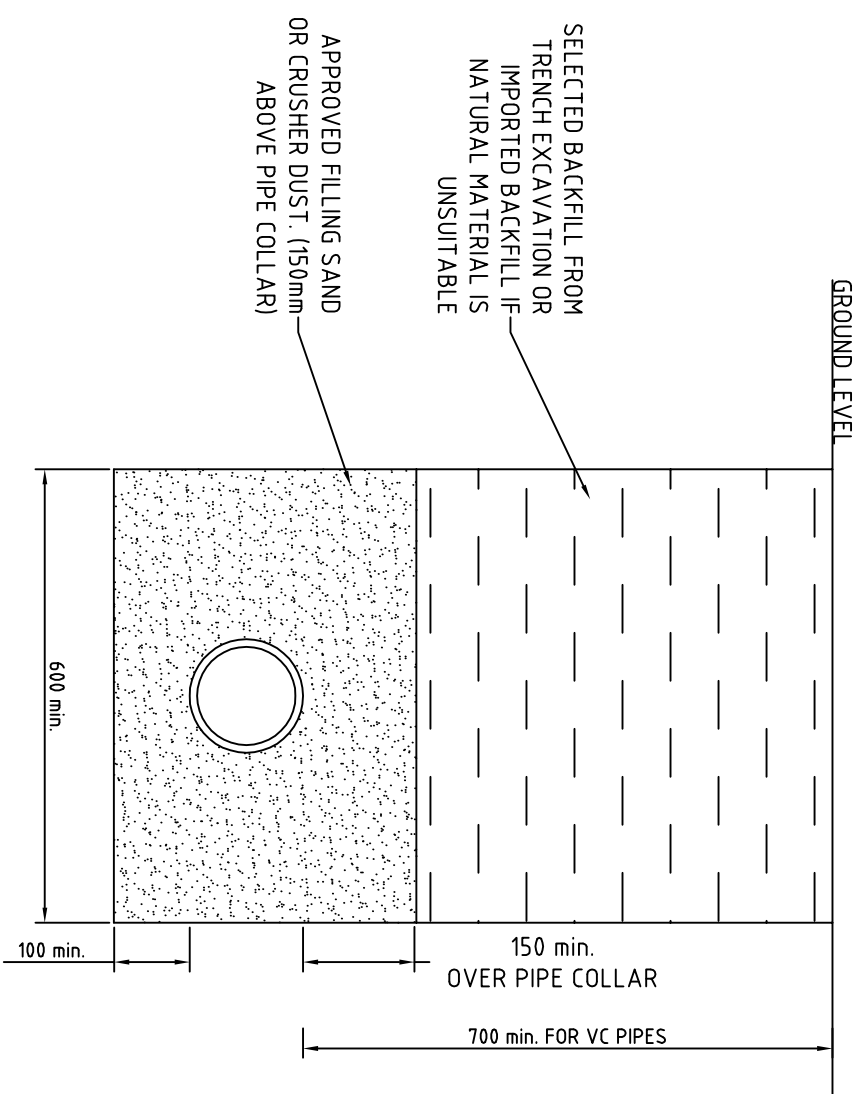
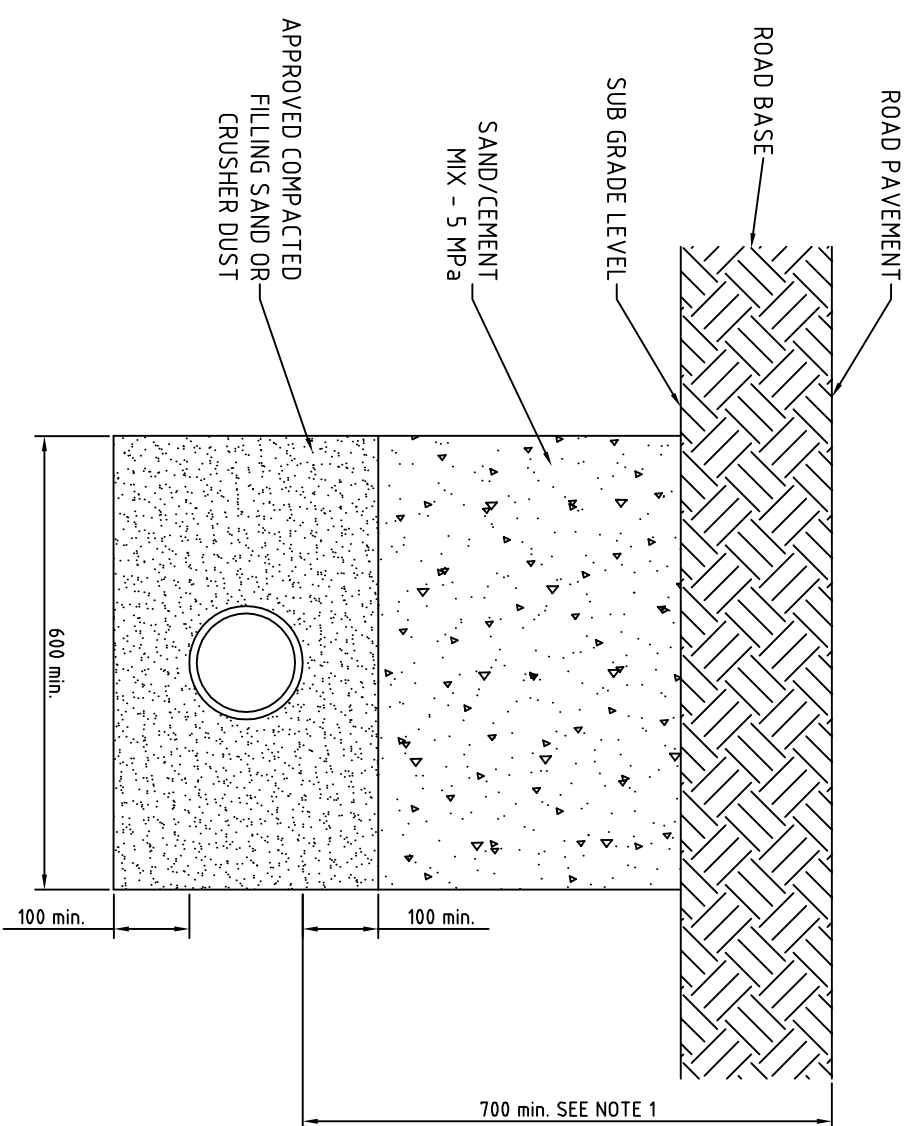
TO BE USED IN RURAL RESIDENTIAL AREAS WITHOUT KERB AND GUTTER

REV.	DESCRIPTION	INITIALS	DATE	<div><div>PROJECT</div><div>DESCRIPTION</div></div>		
A	ISSUED FOR COMMENT	NS	22/10/08			
B	ISSUED FOR COMMENT	JC	24/2/09			
C	APPROVED FOR USE	GSB	03/07/09			
				<div>WATER RETICULATION</div> <div>INDICATOR POSTS AND MARKERS</div>		

DWG NO.	PAGE NO.	REVISION NO.
WBC024		C



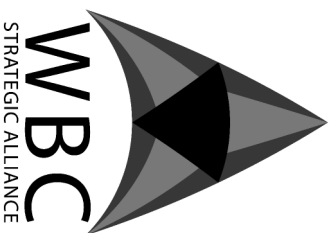
NOTES:



CASE No. 1 - ROAD CROSSINGS

UNDER ROAD PAVEMENT AND 1 m EACH SIDE OF ROADWAY IMMEDIATELY BEHIND KERB LINE.  
(EXISTING ROADS ONLY)

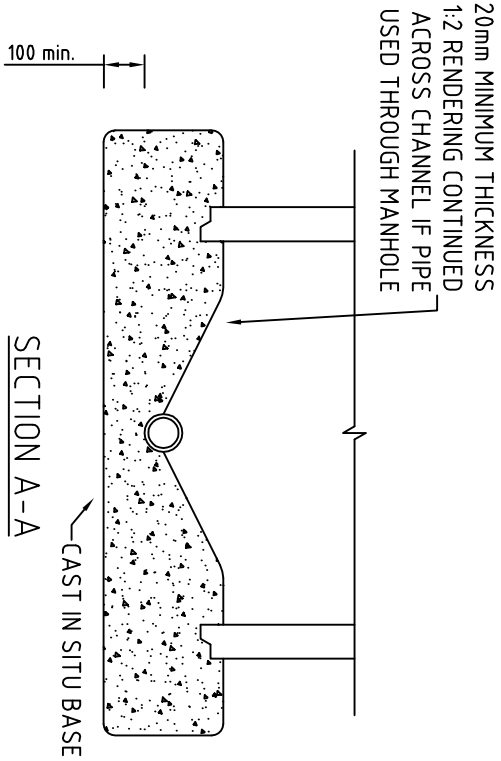
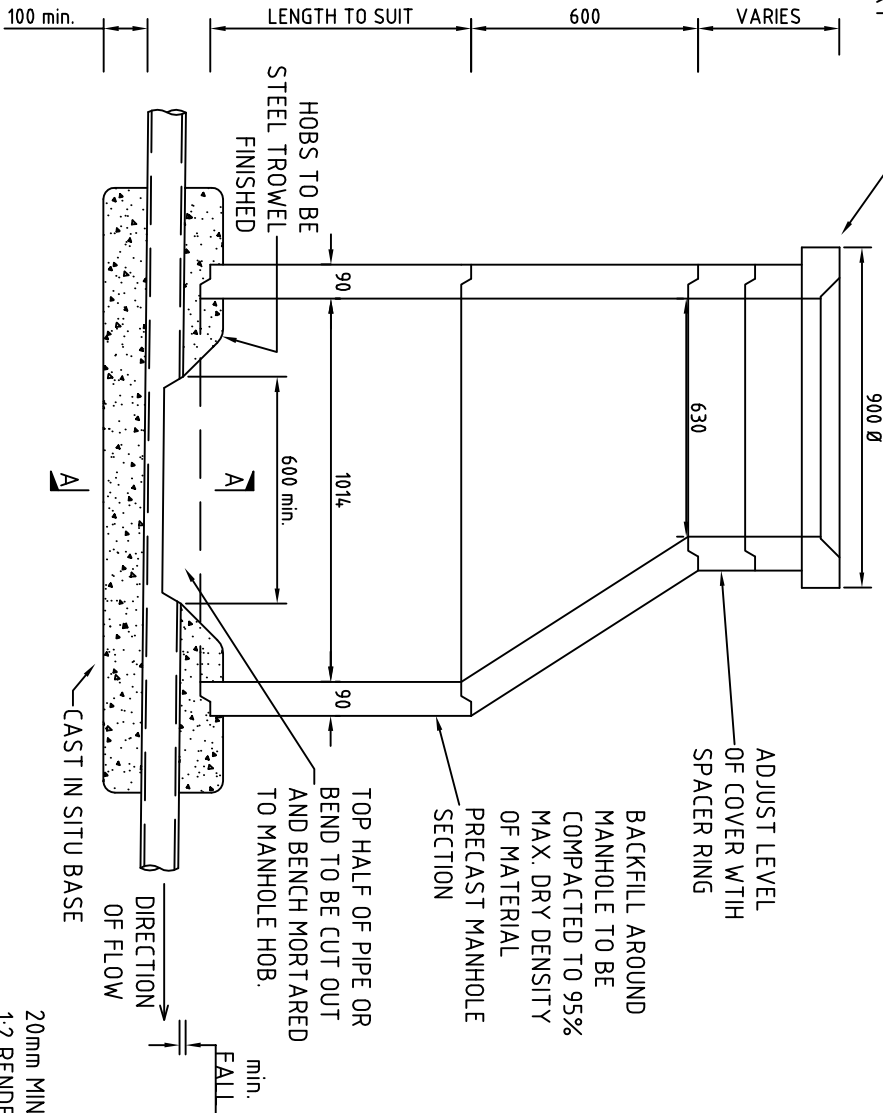
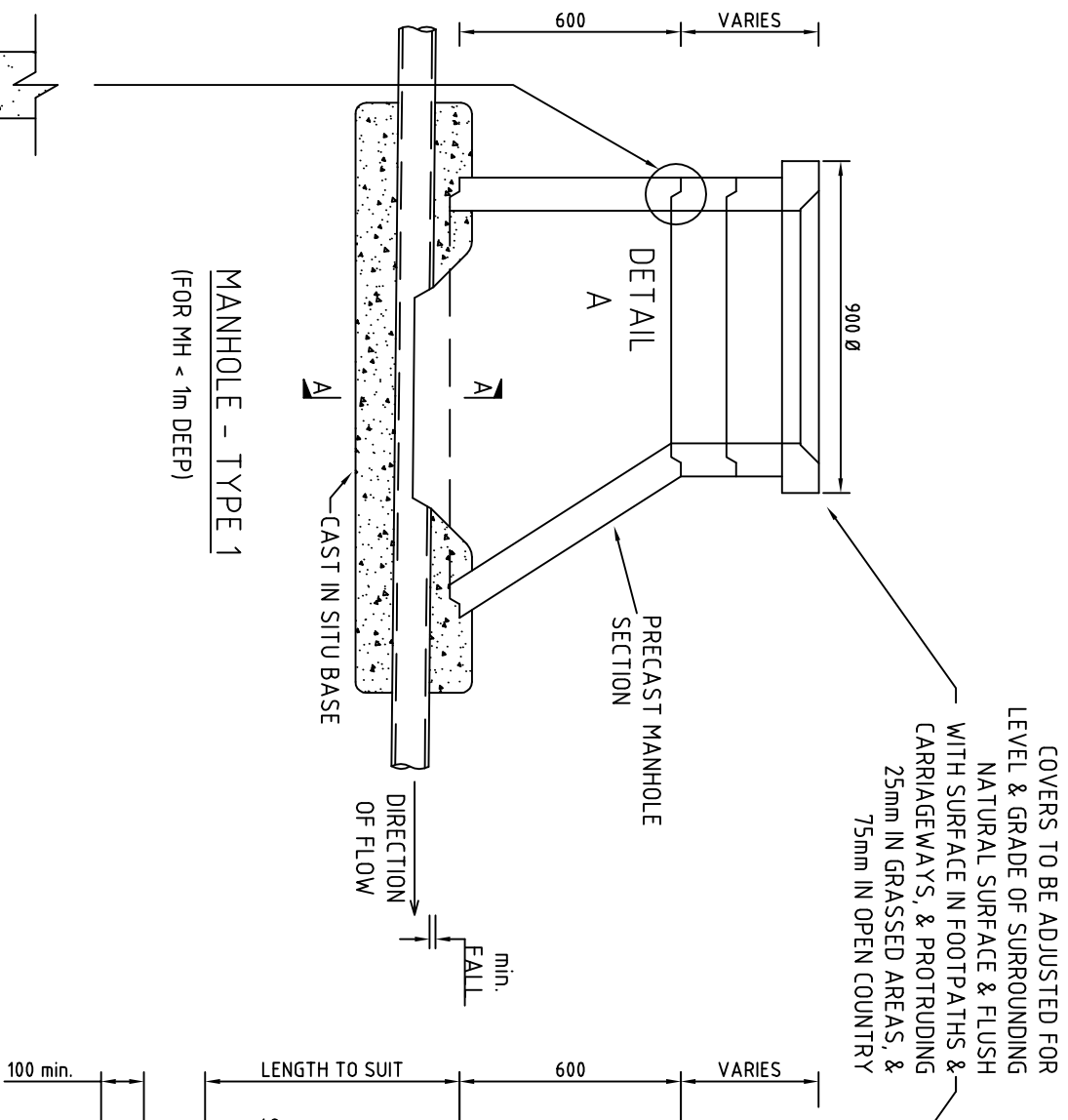
CASE No. 2 - ALL OTHER CONDITIONS

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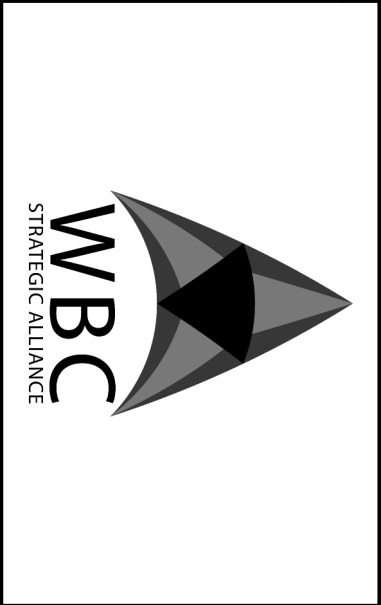
PROJECT	STANDARD DETAILS		
DESCRIPTION	SEWER PIPE BEDDING		
DWG NO.	WBC025	PAGE NO.	REVISION NO.
			B

NOTES:

- 1. MAXIMUM MANHOLE SPACING - 90m
- 2. PRECAST MANHOLE COMPONENTS TO CONFORM WITH NSW GOVERNMENT STANDARDS.
- 3. MANHOLE COVERS TO BE SUPPLIED WITH "GATIC" FITTINGS.
- 4. HEAVY DUTY COVERS AND SURROUNDS TO BE USED IN ROADWAYS,
- 5. MANHOLE COVERS TO HAVE SINGLE LIFTING LUGS.
- 6. THE SUBSOIL DRAINAGE EFFECT OF SAND BEDDING OF PIPES TO BE RELIEVED AT LOCATIONS WHEREVER POSSIBLE.
- 7. ALL STRAIGHT THROUGH MANHOLES TO HAVE A MINIMUM FALL OF 50mm THROUGH MANHOLE.
- 8. THE MINIMUM DROP IN A MANHOLE FOR STRAIGHT THROUGH AND FOR ANGLES LESS THAN 45° CHANGE IN DIRECTION IS 30mm.
- 9. FOR ANGLES GREATER THAN 45° AND LESS THAN 90° THE MINIMUM DROP SHALL BE 50mm.
- 10. FOR DROP PITS AND JUNCTION MANHOLES REFER DRAWING NO. WBC028.



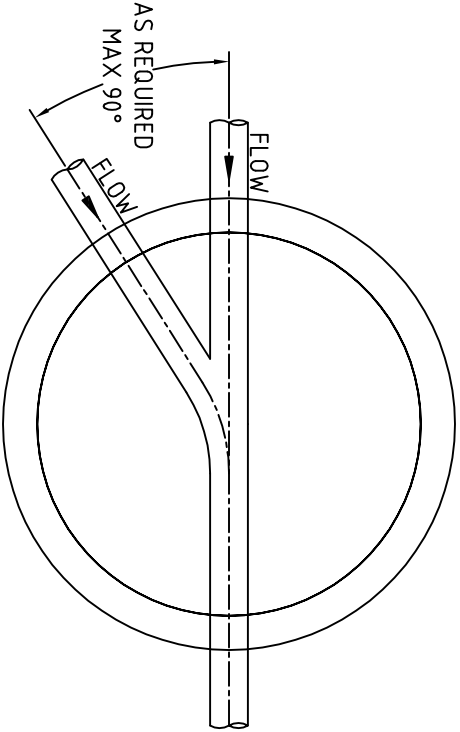
REV.	DESCRIPTION	INITIALS	DATE
A	ISSUED FOR COMMENT	NS	22/10/08
B	APPROVED FOR USE	GSB	03/07/09



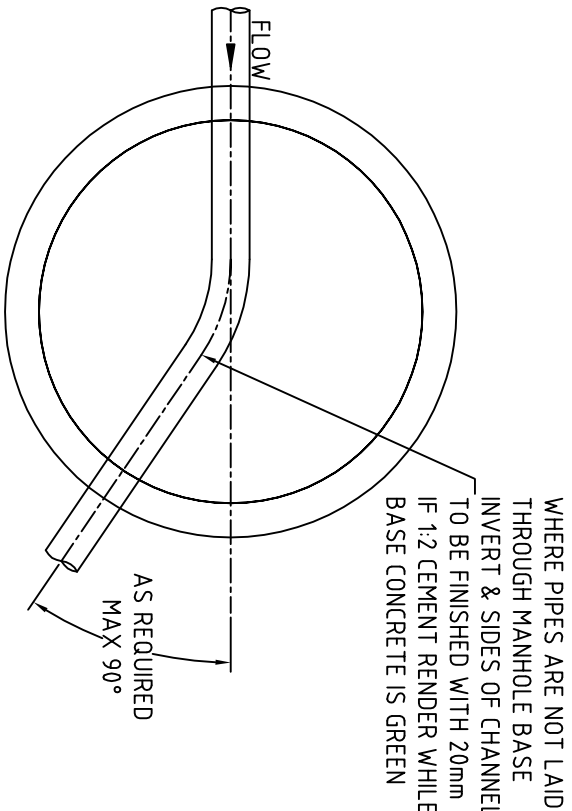
PROJECT		
STANDARD DETAILS		
SEWER		
MANHOLE CONSTRUCTION		
DWG NO.	PAGE NO.	REVISION NO.
WBC026		B

NOTES:

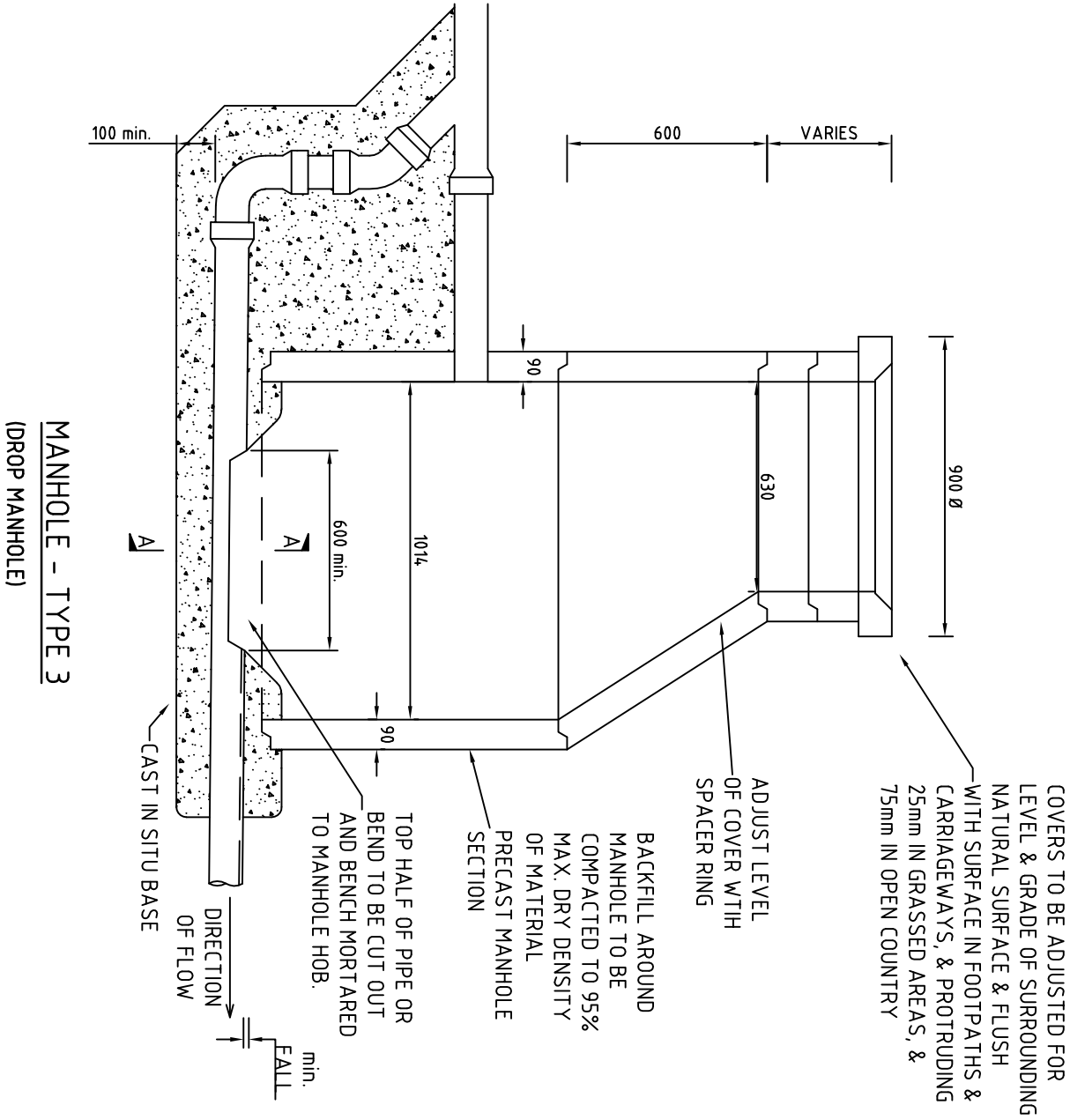
- 1. MAXIMUM MANHOLE SPACING - 90m
- 2. PRECAST MANHOLE COMPONENTS TO CONFORM WITH NSW GOVERNMENT STANDARDS.
- 3. MANHOLE COVERS TO BE SUPPLIED WITH "GATIC" FITTINGS.
- 4. HEAVY DUTY COVERS AND SURROUNDS TO BE USED IN ROADWAYS,
- 5. MANHOLE COVERS TO HAVE SINGLE LIFTING LUGS.
- 6. THE SUBSOIL DRAINAGE EFFECT OF SAND BEDDING OF PIPES TO BE RELIEVED AT LOCATIONS WHEREVER POSSIBLE.
- 7. ALL STRAIGHT THROUGH MANHOLES TO HAVE A MINIMUM FALL OF 50mm THROUGH MANHOLE.
- 8. THE MINIMUM DROP IN A MANHOLE FOR STRAIGHT THROUGH AND FOR ANGLES LESS THAN 45° CHANGE IN DIRECTION IS 30mm.
- 9. FOR ANGLES GREATER THAN 45° AND LESS THAN 90° THE MINIMUM DROP SHALL BE 50mm.
- 10. FOR DROP PITS AND JUNCTION MANHOLES REFER DRAWING NO. WBC028.



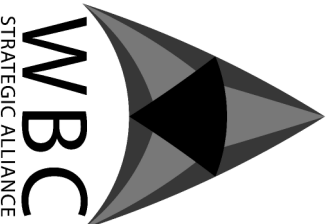
PLAN - JUNCTION

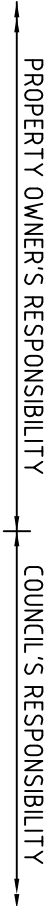


PLAN - ANGLES

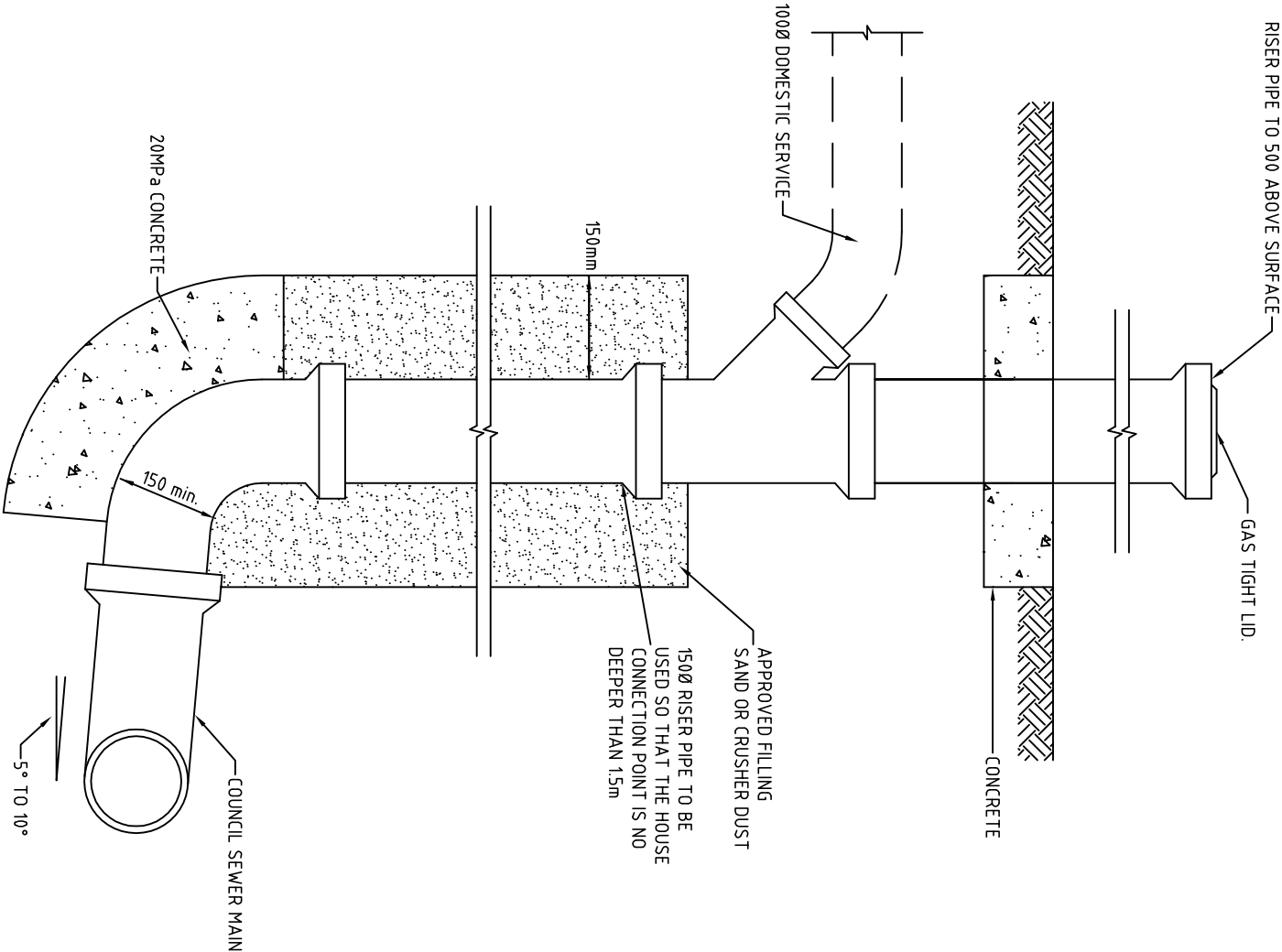


MANHOLE - TYPE 3  
(DROP MANHOLE)

REV.	DESCRIPTION	INITIALS	DATE	<div><div>PROJECT</div><div>DESCRIPTION</div><div>SEWER</div><div>DROP MANHOLE CONSTRUCTION</div></div>		
A	ISSUED FOR COMMENT	NS	22/10/08			
B	APPROVED FOR USE	GSB	03/07/09			
				DWG NO. WBC027		
				PAGE NO.		
				REVISION NO. B		



- NOTES:
1. FOR SEWER LESS THAN 1500 DEEP, A CAPPED SLOPE JUNCTION SHALL BE PROVIDED.
  2. A TEMPORARY RISER SHALL BE EXTENDED 500 ABOVE NATURAL SURFACE TO AID IN FUTURE LOCATION.



TYPICAL CAPPED RISER PIPE  
JUNCTION FOR DEPTH GREATER THAN 1500mm

REV.	DESCRIPTION	INITIALS	DATE	PROJECT		
A	ISSUED FOR COMMENT	NS	22/10/08	STANDARD DETAILS		
B	ISSUED FOR COMMENT	JC	24/2/09			
C	APPROVED FOR USE	GSB	03/07/09			
				SEWER CAPPED RISER CONSTRUCTION		
				DWG NO.	PAGE NO.	REVISION NO.
				WBC028		C

