1A	1B	2	3A	5	6	7A	7B	7C	8A	8B	9A	9B	10
LOCATION/ TERMINATION		NOM. SIZE (DN) (mm)	DESIGN GROUP	LENGTH (m)	"S"	DEPTHS TO INVERT (m)			JUNCTIONS		BENDS		REMARKS AND ADDITIONAL REQUIREMENTS
						MIN	MAX	AVERAGE	QTY	TYPE	QTY	TYPE	

NOTES

1. Construction in trench unless stated otherwise.
2. Column 3A: alternative pipe trench and bedding combinations are described in Appendix 5/1.
3. Column 3A: where a particular bed is excluded from any one group, the group reference is followed by the suffix X and the excluded bed type, e.g. 3XD.
4. Column 6:"S" denotes where the length of pipe is in side slopes of cutting or embankment.
5. Column 10:"A"denotes where additional requirements are stated in Appendix 5/1.
   "B" denotes where backfilling requirements are described in Appendix 5/1.
   "H"denotes where choice of permitted pipe types may be affected by hydraulic design considerations, the basis of which are described in Appendix 5/1.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary
	For comment
Drawn: RL	For tender
Design: RL	For construction ✓
	As constructed
Date: Sept - 2017	Other

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Project Name
Highway Works Details Series 500

Drawing Title
Carrier Drain Pipe Schedules (Specified Design Group)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.01	C0

1A	1B	2	3B	4	5	6	7A	7B	7C	8A	8B	9A	9B	10
LOCATION/ TERMINATION		NOM. SIZE (DN) (mm)	PARTIC. PIPE	BED TYPE	LENGTH (m)	"S"	DEPTHS TO INVERT (m)			JUNCTIONS		BENDS		REMARKS
							MIN	MAX	AVERAGE	QTY	TYPE	QTY	TYPE	

NOTES

1. Construction in trench unless stated otherwise.

2. Column 3B: abbreviations:-
   VCL Vitrified Clay (Pipe Class L),
   VC95 Vitrified Clay (Pipe Class 95),
   VC120 Vitrified Clay (Pipe Class 120),
   VC160 Vitrified Clay (Pipe Class 160),
   VC200 Vitrified Clay (Pipe Class 200),
   PC120 Precast Concrete (Pipe Class 120),
   UPVC Unplasticized PVC,
   Other abbreviations described in column 10.

3. Column 6;"S" denotes where the length of pipe is in side slopes of cutting or embankment

4. Column 10:"A" denotes where additional requirements are stated in Appendix 5/1. "B" denotes where backfilling requirements are described in Appendix 5/1

5. Column 4: see Highway Construction Details Drg.No.F1,(MCHW3.1)

Rev	Detail	By	Date

Revisions

Original Version	Preliminary	
	For comment	
Drawn: RL	For tender	
Design: RL	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

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Approved by:- (Drawing NOT approved if this box is empty) Michael Smith Digitally signed by Mike Smith Date: 2019.07.31 12:15:18 +01'00'

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Project Name
Highway Works Details
Series 500

Drawing Title
Carrier Drain Pipe Schedules
(Particular Design)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.03	C0

A4

11A	11B	12	13A	15	16	17A	17B	17C	18A	18B	19A	19B	20	21	22
LOCATION/ TERMINATION		NOM. SIZE (DN) (mm)	DESIGN GROUP /TYPE	LENGTH (m)	FILTER TYPE	DEPTHS TO INVERT (m)			JUNCTIONS (Preformed)		BENDS (Preformed)		PAVEM'T EDGE TYPE	SURFACE LAYER	REMARKS AND ADDITIONAL REQUIREMENTS
						MIN	MAX	AVERAGE	QTY	TYPE	QTY	TYPE			

NOTES

1. Alternative pipe and trench combinations are described in Appendix 5/1.
2. Column 13A: where a particular trench condition is excluded from any one group the group reference is followed by the suffix X and the excluded bed type e.g. 4XG.
3. Column 16: Type C filter material is specified in Appendix 5/1.
4. Column 20: Pavement edge types are shown on Highway Construction Details Drg. No. B15.
5. Column 21: Describes surface treatment i.e. "T150" denotes "topsoil 150mm thick".
6. Column 22: "M" denotes that a mesh requirements is specified in Appendix 5/1 "G" denotes that a geotextile membrane requirement is specified in Appendix 5/1. "L" denotes that lightweight aggregate is specified in Appendix 5/1.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

Checked by:- Digitally signed by Simon Cartledge Date: 2019.06.07 14:14:22 +01'00'

Approved by:- (Drawing NOT approved if this box is empty) Digitally signed by Mike Smith Date: 2019.07.31 12:20:20 +01'00'

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Project Name
Highway Works Details Series 500

Drawing Title
Filter Drain Pipe Schedules (Specified Design Groups)

Grid reference :		
Original Drawing Size : A4	Dimensions : mm	
Scale : NA	Copyright © Amey SCC	

Drawing No	Rev
05.05	C0

A4

11A	11B	12	13B	14	15	16	17A	17B	17C	18A	18B	19A	19B	20	21	22
LOCATION/ TERMINATION		NOM. SIZE (DN) (mm)	PARTIC. PIPE	TRENCH /BED TYPE	LENGTH (m)	FILTER TYPE	DEPTHS TO INVERT (m)			JUNCTIONS (Preformed)		BENDS (Preformed)		PAVEM'T EDGE TYPE	SURFACE LAYER	REMARKS AND ADDITIONAL REQUIREMENTS
							MIN	MAX	AVERAGE	QTY	TYPE	QTY	TYPE			

NOTES

1. Column 16: Type C Filter material is specified in Appendix 5/1.
2. Column 13B: abbreviations:-
   VC160 Vitrified Clay (Pipe Class 160),
   VC200 Vitrified Clay (Pipe Class 200),
   UPVC Unplasticized PVC
3. Column 14: Trench types are shown on HCD Drg. No. F2.
4. Column 20: Pavement edge types are shown on HCD Drg. No. B15.
5. Column 21: Describes surface treatment i.e. "T150" denotes "topsoil 150mm thick".
6. Column 22: "M" denotes that a mesh requirements is specified in Appendix 5/1
   "G" denotes that a geotextile membrane requirement is specified in Appendix 5/1.
   "S" denotes that sub-base materials are described in Appendix 5/1.
   "L" denotes that lightweight aggregate is specified in Appendix 5/1.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

Checked by:- S.J. Cartledge Digitally signed by Simon Cartledge Date: 2019.06.18 11:22:29 +01'00'

Approved by:- (Drawing NOT approved if this box is empty) Michael Smith Digitally signed by Mike Smith Date: 2019.07.31 12:25:08 +01'00'

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Project Name
Highway Works Details
Series 500

Drawing Title
Filter Drains
Filter Drain Pipe Schedules
(Particular Design)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.07	C0

A4

31A	31B	32	33	34	35	36	37A	37B	38	39A	39B	39C	40
LOCATION/ TERMINATION		DESIGN GROUP	PIPE DIA. (MIN) (mm)	LENGTH (m)	APPLIC'N TYPE	HEIGHT (mm)	PIPE SURROUND	BACKFILL/ FILTER MATERIAL	MARKER TAPE	DEPTH (m)			REMARKS AND ADDITIONAL REQUIREMENTS
										MIN	MAX	AVERAGE	

NOTES

1. Fin drains have no entry in cols.39
2. Column 33: no entry for drain type 5.
3. Column 35: types are shown on Highway Construction Details Drawings series B Nos. 2 to 4, 6, to 13 or are specific references described in Appendix 5/4.
4. Column 36: as defined on Highway Construction Details Drg. Nos. F18, F19, F20.
5. Pipe surround material is specified in Appendix 5/4.
6. Filter material Type C is specified in Appendix 5/1 for narrow filter drains.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary	
	For comment	
Drawn: RL	For tender	
Design: RL	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

Checked by:- Digitally signed by Simon Cartledge Date: 2019.06.03 17:54:06 +01'00'

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Project Name
Highway Works Details Series 500

Drawing Title
Fin and Narrow Filter Drains- Pipe Schedules

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.09	C0

A4

51	52	53	54A	54B	54C	55A	55B	56	57	58	59	60	61
LOCATION	REF. No.	TYPE & SUB-TYPE	INVERT DETAIL			BRANCHES 1	2	BASE SLAB LEVEL	COVER REF/ LEVEL	DEPTH TO INV./ BASE SLAB	BENDS IN ADJ. PIPE	LADDER	REMARKS AND ADDITIONAL REQUIREMENTS
			INLET DIA.	OUTLET DIA/ LEVEL	CURVED INVERT ANGLE	DIA/ LEVEL	DIA/ LEVEL						

NOTES

1. Dimensions are in millimetres. Levels are in metres.
2. Column 52: Reference numbers are explained in Appendix 5/1.
3. Column 53: Types references are listed in Appendix 5/1.
4. Column 56: refers to catchpits only
5. Column 57: References to covers and frames are scheduled in Appendix 5/1.
6. Column 59: "Yes" advises of relevant entry in pipe schedules.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
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Date: Sept - 2017		Other	

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Project Name
Highway Works Details Series 500

Drawing Title
Manholes and Catchpits- Chamber Schedules

Grid reference :		
Original Drawing Size : A4	Dimensions : mm	
Scale : NA	Copyright © Amey SCC	

Drawing No	Rev
05.11	C0

A4

71	72	73	74	75A	75B	76	77	78
LOCATION	REF. No.	DESIGN GROUP /TYPE	T OR UT	OUTLET		POT INT. DEPTH	GRATING REF. /SIZE	REMARKS AND ADDITIONAL REQUIREMENTS
				DIA	DEPTH TO INV.			

NOTES

1. Dimensions are in millimetres. Levels are in metres.
2. Column 73: Type references are defined in Appendix 5/1.
3. Column 74: T Trapped UT Untrapped
4. Column 75B:Depth measured from lowest point on paved area immediately adjacent to grating
5. Column 77: References to grating and frame are scheduled in Appendix 5/1.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary	
	For comment	
Drawn: RL	For tender	
Design: RL	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

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Project Name
Highway Works Details Series 500

Drawing Title
Street Gullies - Gully Schedules

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.13	C0

81	82	83	84	85A	85B	85C	86	87	88A	88B	89
LOCATION	TYPE	NOM. SIZE (DN) (mm)	LENGTH (m)	DEPTHS TO INVERT (m)			"S"	STATED BED TYPE	TERMINATION		REMARKS AND ADDITIONAL REQUIREMENTS
				MIN	MAX	AVERAGE			1	2	

NOTES

1. Construction in trench unless stated otherwise.
2. Type references are described in Appendix 5/2.
3. Column 86: denotes the stated length to be in side slope of cutting or embankment.
4. Column 88: indicates duct end condition:
   "M" denotes plug and marker block,
   "D" denotes build into drawpit (+ref.no.)
5. Column 88: invert levels of duct ends (as second line entry) show where precise alignment is required.

Rev	Detail	By	Date
Revisions			

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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Project Name
Highway Works Details Series 500

Drawing Title
Service Ducts - Schedules

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No	Rev
05.21	C0

91	92	93	94	95	96	97	98A	98B	99
LOCATION	REF No.	DES.GP. /TYPE	STATED CONSTR.	COVER AND FRAME REF.	COVER LEVEL (A.O.D.) (m)	DEPTH TO UPPERMOST SURFACE OF BASE SLAB (m)	BUILD-IN DUCTS		REMARKS AND ADDITIONAL REQUIREMENTS
							STRAIGHT No./DIA.	BENDS No./DIA.	

NOTES

1. Design Group and Type references are listed in Appendix 5/2 and referenced to detail drawings.

2. Cover and frame references are scheduled in Appendix 5/2.

3.Column 98B denotes bends required on drawpit detail drawing.

Rev	Detail	By	Date
Revisions			

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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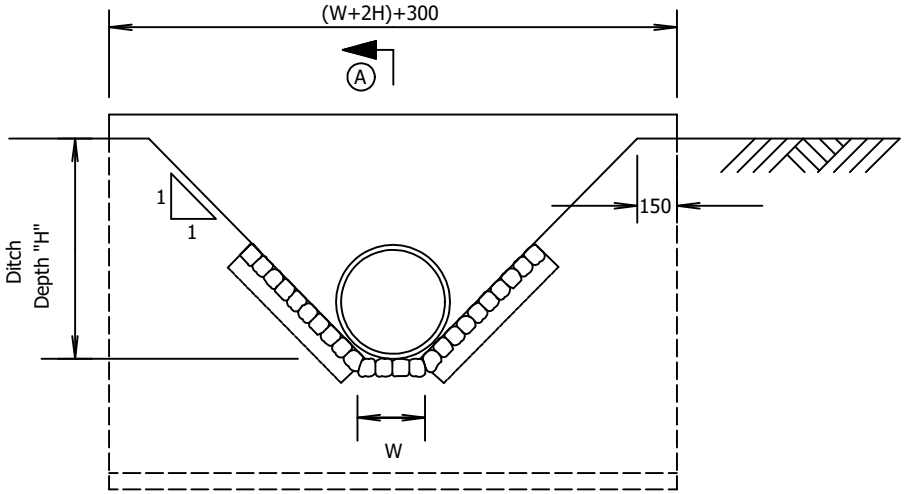
Project Name
Highway Works Details Series 500

Drawing Title
Drawpits and Duct Chambers- Chamber Schedules

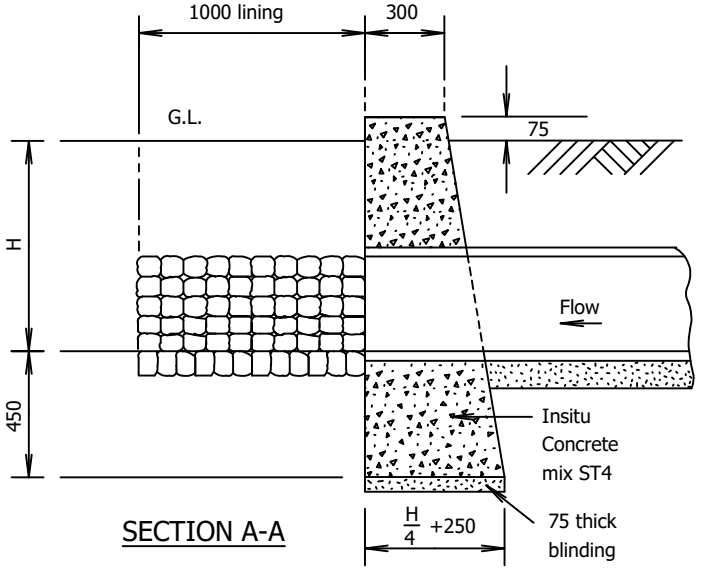
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Drawing No	Rev
05.23	C0

A4



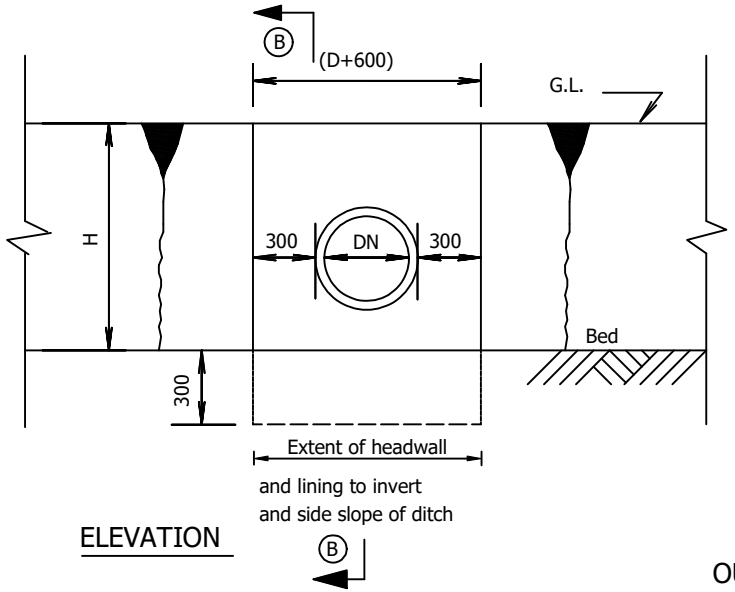
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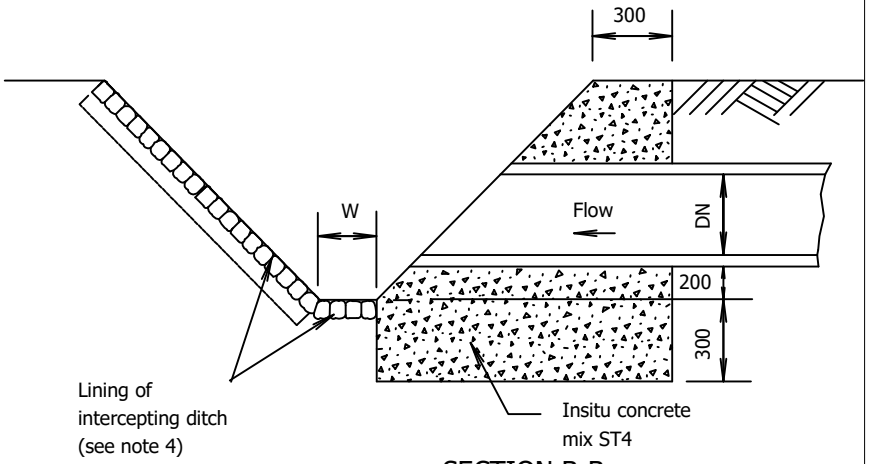
SECTION A-A

OUTFALL TYPE 1

(Pipe and ditch in line)



ELEVATION



SECTION B-B

OUTFALL TYPE 2

(Pipe discharging through side of ditch)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Intercepting ditch profile as shown on Earthworks drawings,
   H = 800max.
   W = 250.
3. Pipe invert level and diameter as stated in pipe schedules.
4. Type and thickness of lining shall be as described in the Contract.
5. Exposed formed concrete surfaces to have Class F2 finish.
6. Unformed concrete surfaces to have Class U2 finish.

FOR PIPES 300MAX. DIAMETER
TO INTERCEPTING DITCH
MAX. DEPTH 800

Rev	Detail	By	Date
	Revisions		

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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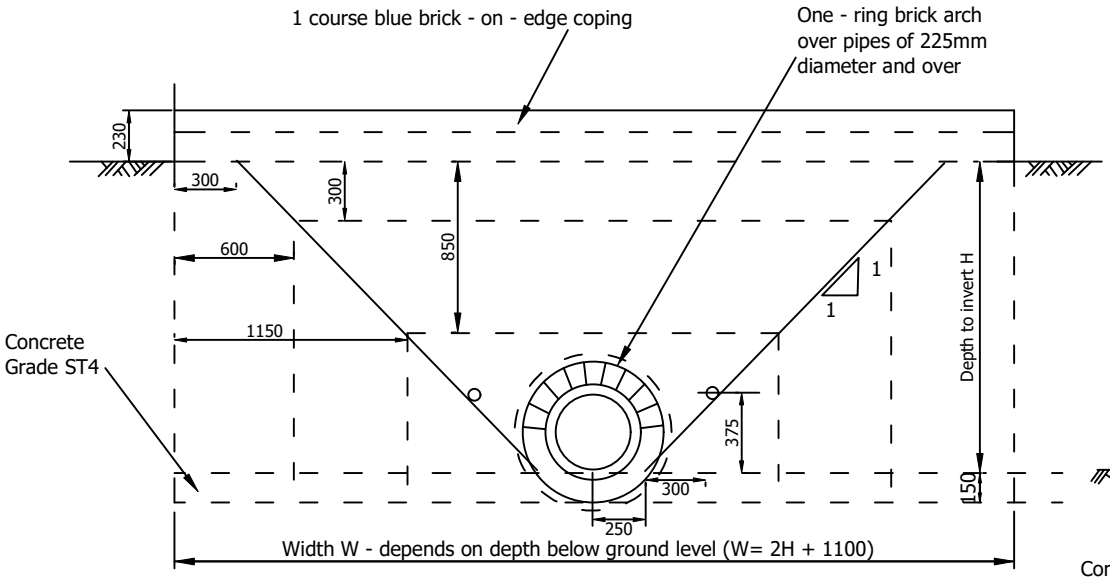
Project Name
Highway Works Details
Series 500

Drawing Title
Small Headwall
Outfall Types 1 and 2
(Insitu Concrete)

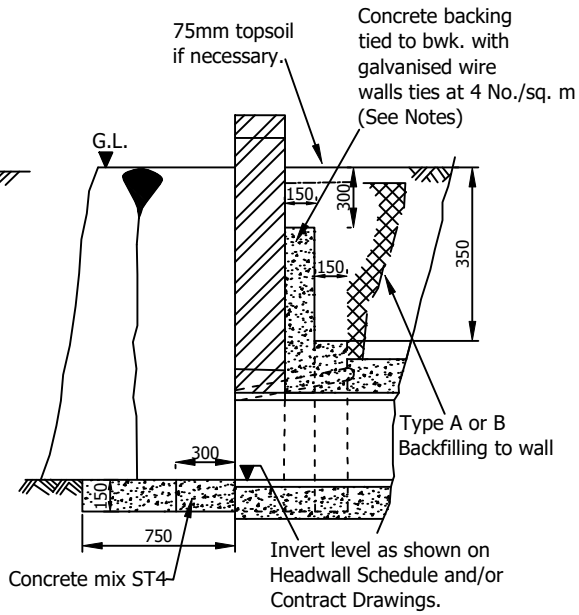
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Drawing No	Rev
05.31	C0

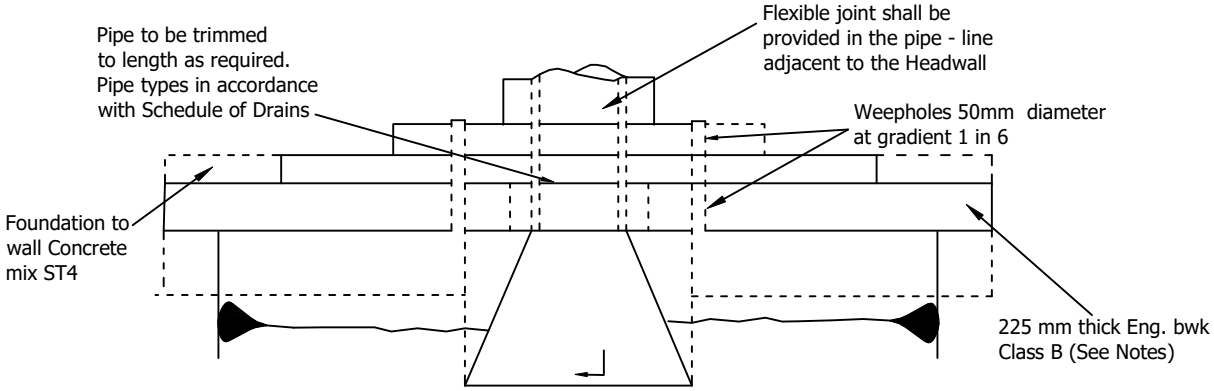
A4



ELEVATION OF HEADWALL
(Group C shown)



SECTION



PLAN
OUTFALL TYPE 3

NOTES

1. All dimensions are in millimetres.
2. Specified Groups;
   3A - Depth to invert up to 0.5m
   3B - Depth to invert 0.5m - 1.0m
   3C - Depth to invert 1.0m - 1.5m
3. Brickwork to headwall to be in Flemish bond with struck joints not exceeding 6mm. Mortar to be Class 2
4. Concrete backing to wall
   Group 3A - Backing omitted
   Group 3B - 150mm Thick only
   Group 3C - as shown
5. Concrete mix ST4 to Groups B & C Backfilling material to Groups A & B to specification Table 5/5

Rev	Detail	By	Date
Revisions			

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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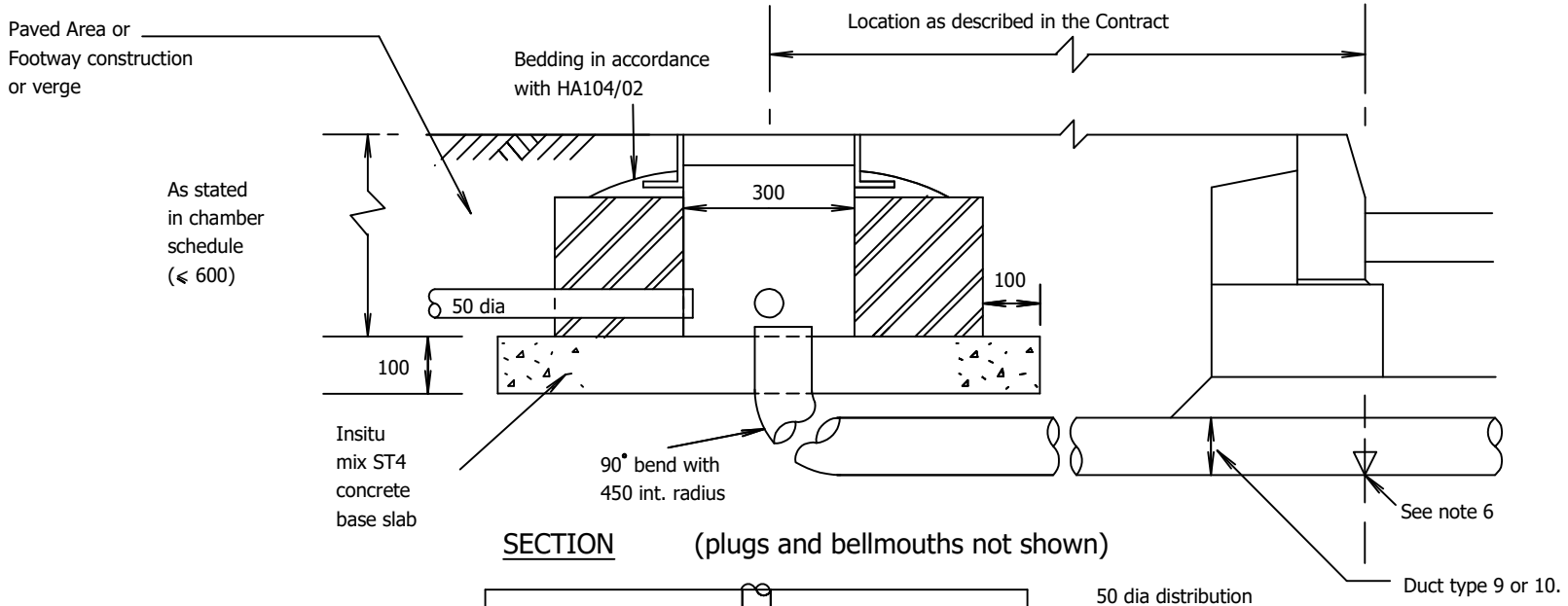
Project Name
Highway Works Details Series 500

Drawing Title
Small Headwall Outfall Type 3

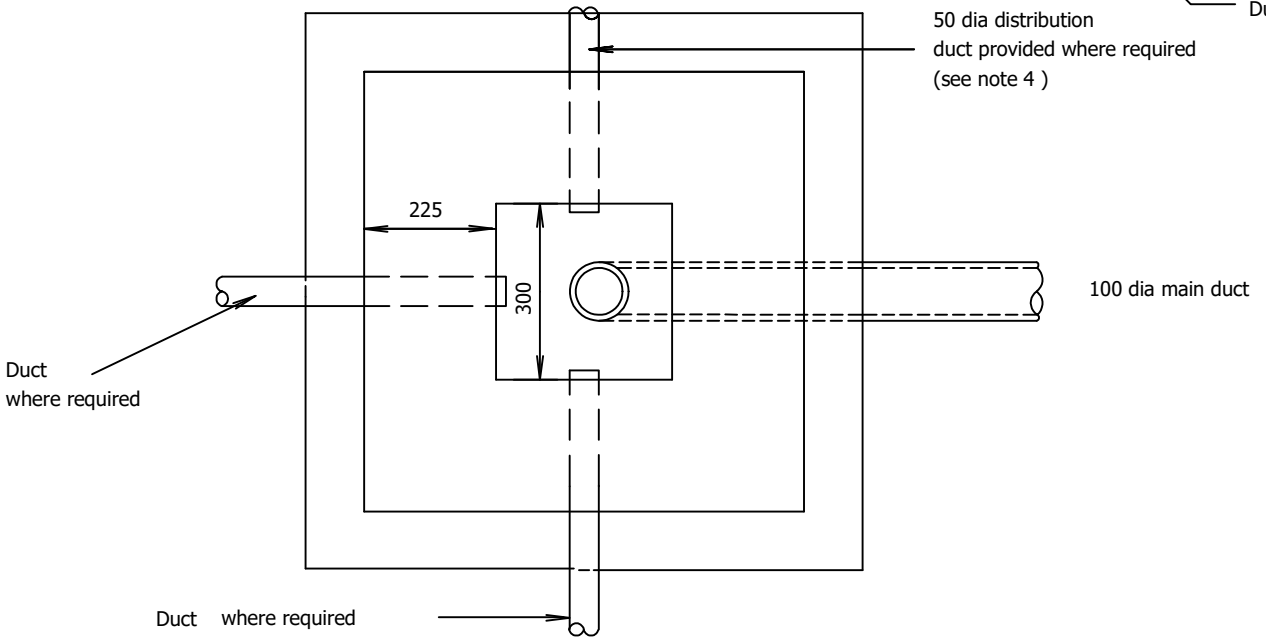
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05.32	C0

A4



SECTION (plugs and bellmouths not shown)



PLAN (cover and frame not shown)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Main road-crossing duct shall be checked before fitting bend.
3. Chamber walls to be constructed in HD clay engineering bricks (conforming to BS EN 771-1:2011 + A1:2015 Class B) with mortar designation (i), or insitu concrete mix ST4.
4. Ducts to equipment bases are described in the chamber schedules, and shown on the layout drawings.
5. Cover and frame requirements are as described in the contract
6. Duct schedules shall specify invert levels where ducts under carriageways are required.
7. For insitu concrete chambers,wall finish shall be:
   internal Class F2
   external Class F1
   top surfaces Class U1.
8. Drawpit type D1 shall not be installed at both ends of a duct under a carriageway.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

Checked by:- Digitally signed by Simon Cartledge Date: 2019.10.04 13:45:23 +01'00'

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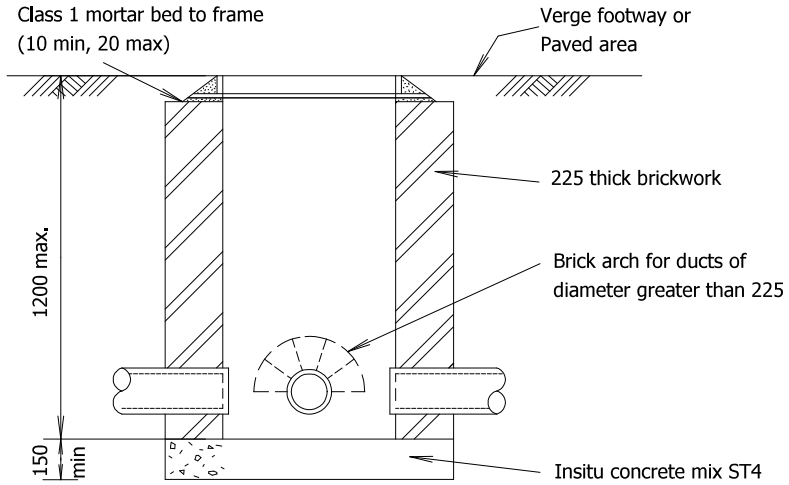
Project Name
Highway Works Details
Series 500

Drawing Title
Duct Chamber
Type D1 Chamber

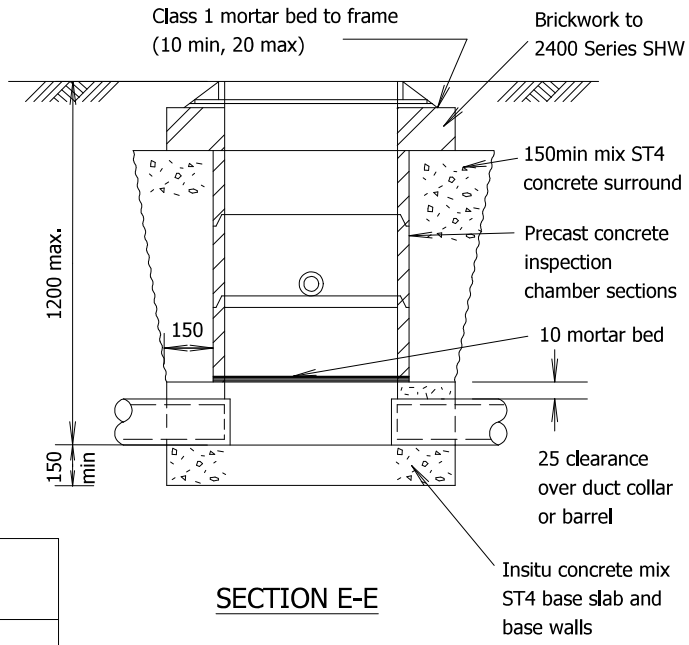
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Drawing No	Rev
05.41	C0

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Layout Name:- 0541
A4

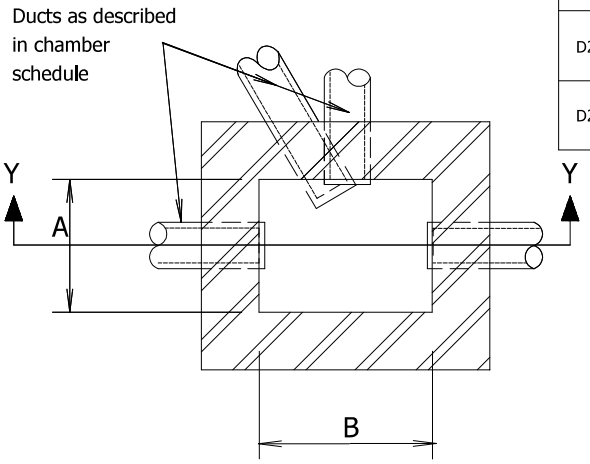


SECTION Y-Y

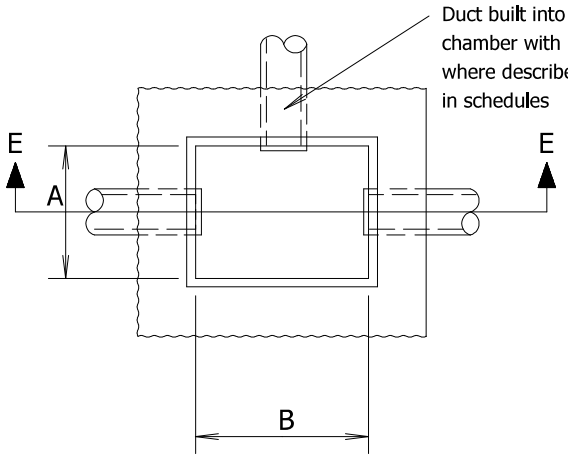


SECTION E-E

Chamber Sub Types	Internal Plan Dimensions	Depth to base slab	Cover
D2a	A=610 B=610	≤700	Single access cover B125
D2b	A=760 B=760	>700	Single access cover B125
D2c	A=610 B=1180	>700	Double access cover B125



PLAN (cover and frame not shown)
(Bell-mouths omitted for clarity)



PLAN (cover and frame not shown)

NOTES
1. ALL DIMENSIONS IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. Chamber walls to be constructed in HD clay engineering bricks (conforming to BS EN 771-1:2011 + A1:2015 Class B) with mortar designation (i), or precast concrete to BS 5911-4:2002 + A2:2010.
3. For number of ducts, see chamber schedules.
4. For duct invert levels, see pipe schedules.
5. Step Irons to BS EN 13101:2002 to be provided at 300 centres vertically where depth to base slab exceeds 900.
6. This type of drawpit shall not be constructed in carriageways.
7. Brickwork at top of chamber walls to be corbelled as necessary to suit opening dimensions of cover and frame.

Rev	Detail	By	Date
	Revisions		

Original Version		Preliminary	
		For comment	
Drawn: RS		For tender	
Design: RS		For construction	✓
		As constructed	
Date: Aug 2019		Other	

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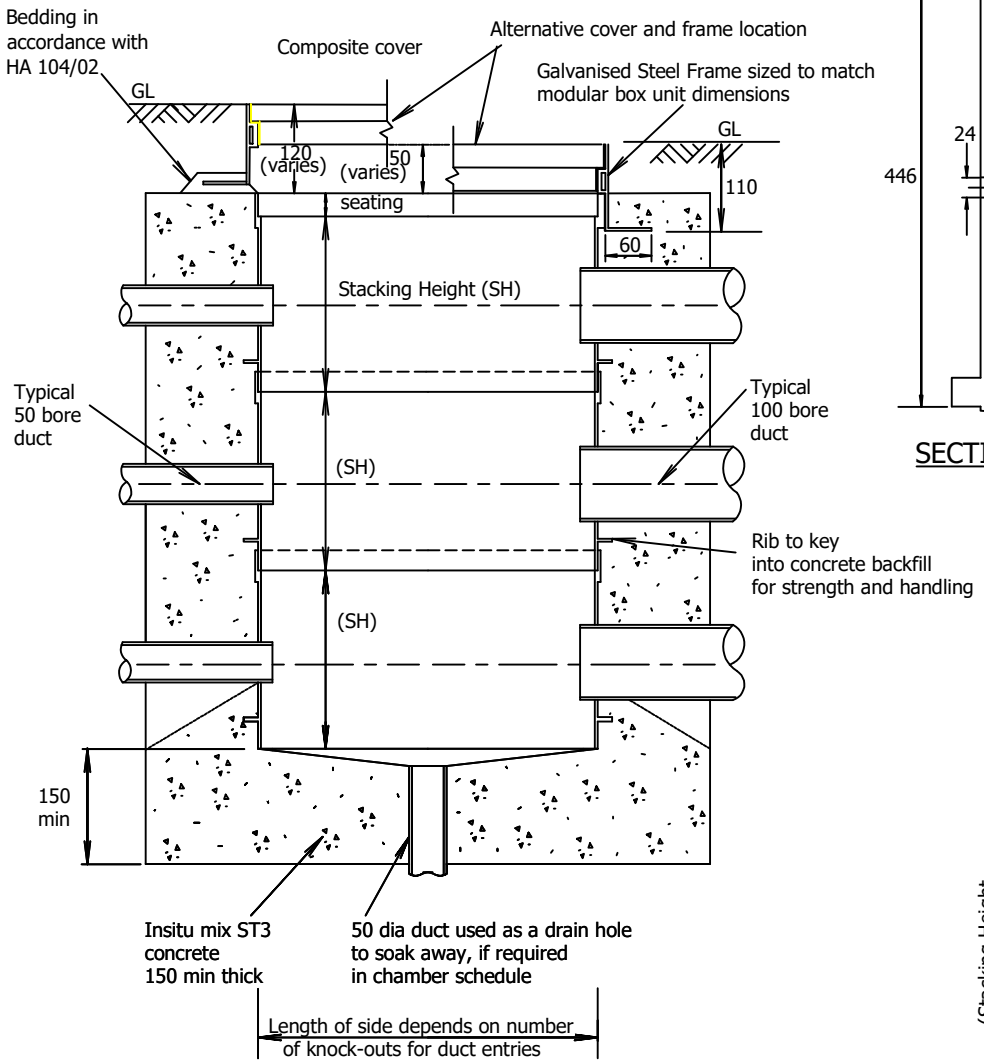
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Project Name
Highway Works Details
Series 500

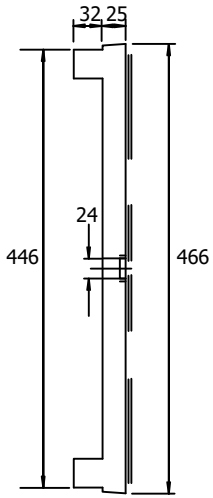
Drawing Title
Duct Chamber
Type D2 Chamber

Grid reference :		
Original Drawing Size : A4	Dimensions : mm	
Scale : NTS	Copyright © Amey SCC	

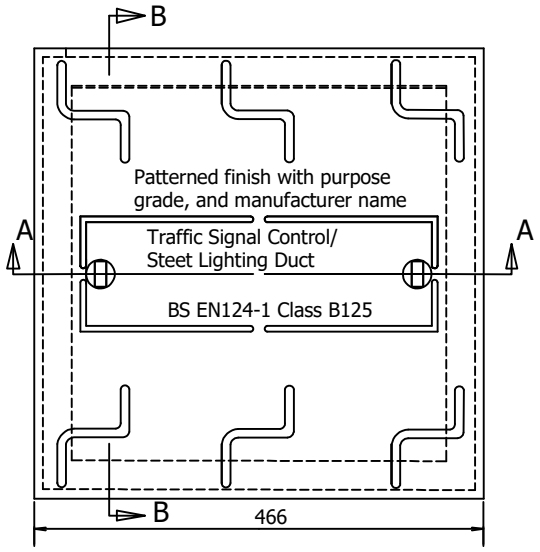
Drawing No	Rev
05.42	C0



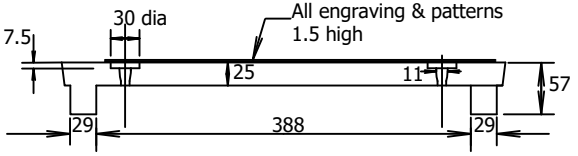
TYPICAL SECTION THROUGH MODULAR BOX CONSTRUCTION OF DRAWPIT



SECTION B-B

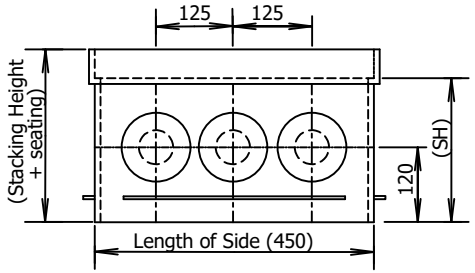


PLAN ELEVATION



SECTION A-A

Typical Composite Cover Detail for a 450 square (o/a) chamber module and suited steel frame



TYPICAL ELEVATION

Modular box unit showing arrangement of ducts knock-outs prepared for 50 bore or 100 bore ducts

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Chamber shall be formed of proprietary modular box sections, stackable in square or rectangular plan sizes with prepared points for duct entries.
3. Chamber material shall be black 8 thick min. high density polyethylene. Tensile strength 22N/mm. Puncture strength 50MV/m. Temperature stability range -50deg C. to +80 deg C. Resistivity 10/14 ohms.
4. Matching steel frames shall have been hot dip galvanised after fabrication.
5. High strength reinforced polyester composite cover shall exceed the EN124-1:2015 and BS 124-6:2015 Class B125 loading, be temperature resistant, rust proof, non metallic, lightweight, U.V. stabilised, and be self coloured in black, red or buff.
6. Schedules of draw pits giving sizes, duct entries, depths etc, together with further fitness for purpose requirements are described in the contract.
7. Proprietary details to be submitted as required by Appendix 1/4.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: May 2019		Other	

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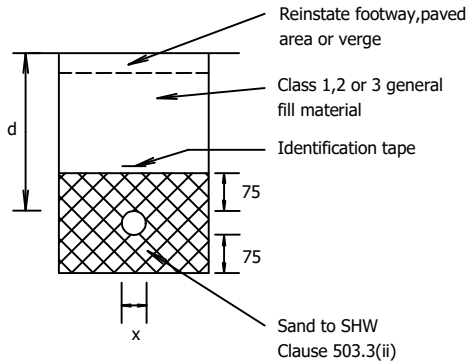
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Project Name
Highway Works Details Series 500

Drawing Title
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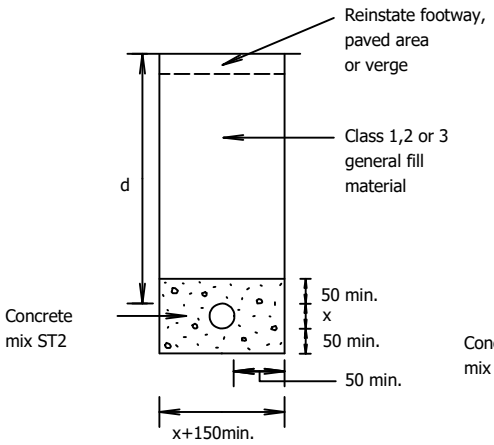
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Drawing No	Rev
05.43	C0



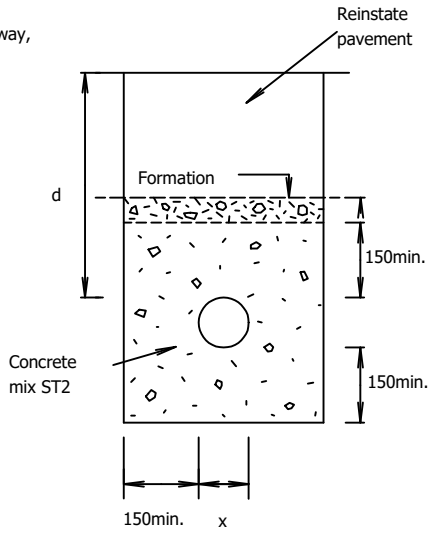
int.dia.=50,100,(as described in the contract
d=300 and as described in the contract

TYPE 6



int.dia.=50
d=500 and as described in the contract

TYPE 7



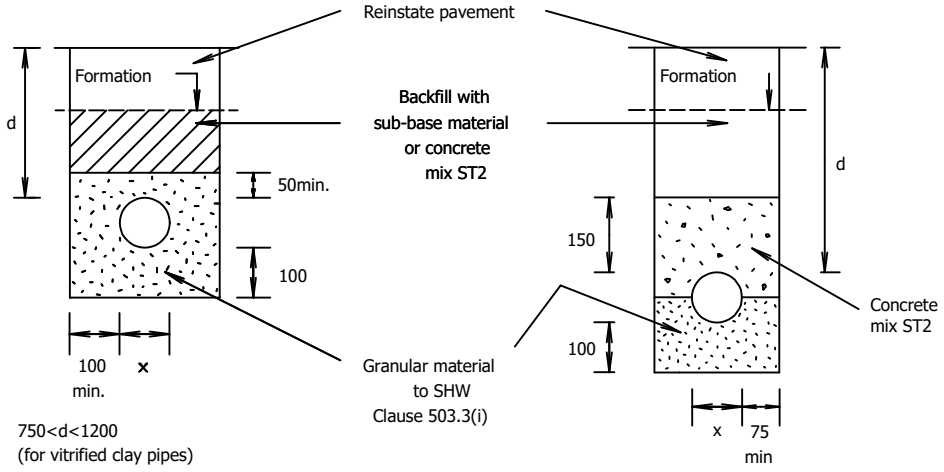
int.dia.=100
d=500,<750,as described in the contract

TYPE 8

Scheme specific designs (as per drainage pipe design) when depth of cover >1200. As described in the contract

TYPES 10

Type Ref.	Permitted Types to SHW Table 5/2
6	UPVC
7	UPVC
8	Clayware to BS 65:1991 "ES"; UPVC
9	Clayware to BS 65:1991 "ES"; UPVC
10	As described in the Contract



750<d<1200
(for vitrified clay pipes)

int. dia.= 100, or as described in the contract

TYPES 9

750<d<1200
(for UPVC pipes)

NOTES

1. All dimensions are in millimetres.
2. This drawing refers to single ducts in trench in all-purpose roads and shall be read in conjunction with Appendix 5/2 and the pipe schedules.
3. The concrete cover to ducts Type 8 and 9 shall extend to the sides of the trench.
4. For ducts Type 10 provide table of trench and bedding details in the contract.
5. Ducts under carriageways (Type 8 and 9) shall be fitted with bellmouths.
6. Ducts under carriageways (Type 8 and 9) shall be provided with precast concrete marker blocks at finished surface level.
7. Slack in drawrope min. 1000 to be coiled under marker block.
8. Identification tape shall be 150 wide x 100 micron thick, colour yellow with black inscription, as described in the Appendix 5/2.
9. Except for Type 7, trench widths shall be min.(x+300), max.(x+600) applied on and below a line 300 above the outside top of the duct.
10. For Type 7 the adjacent cable-in-trench max. trench widths shall apply throughout the ducted length.
11. Reinstatement requirements are as stated in Appendix 7/2.
12. Ducts 'purpose' inscriptions and self-colouring requirements shall be as described in Appendix 5/2.

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2019		Other	

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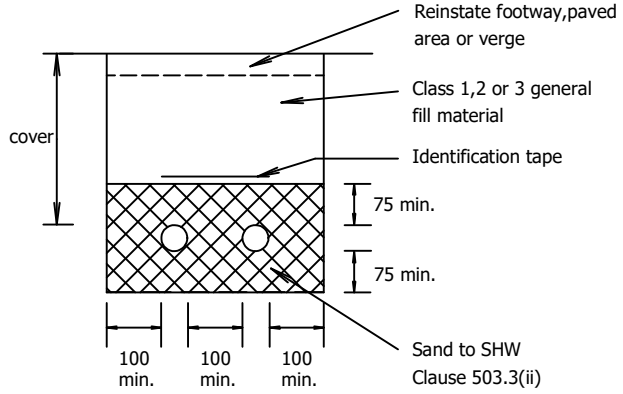
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Series 500

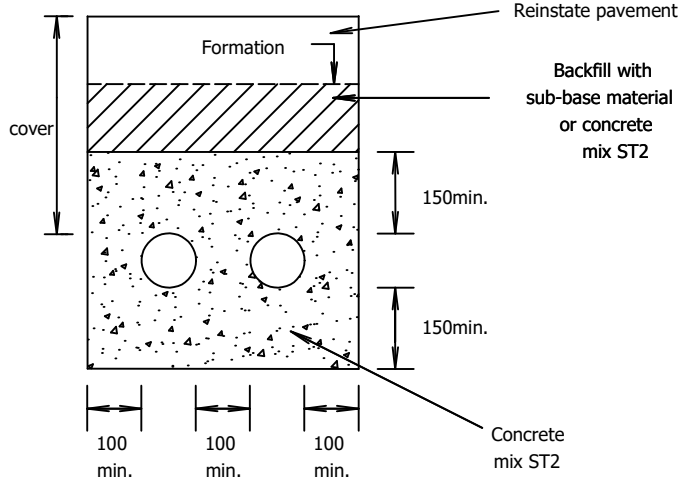
Drawing Title
Service Ducts
Duct Trench & Bedding

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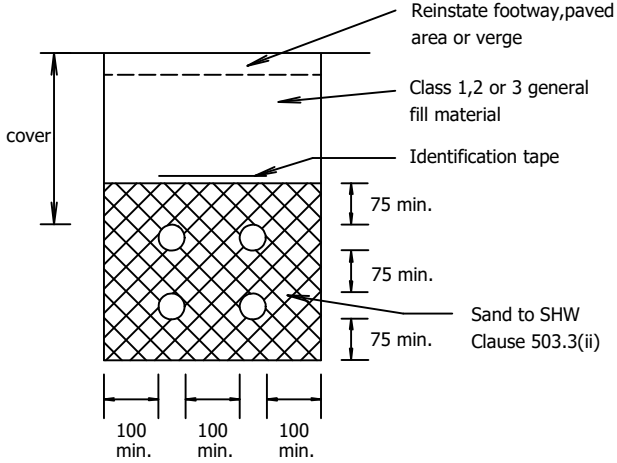
Drawing No	Rev
05.52	C0



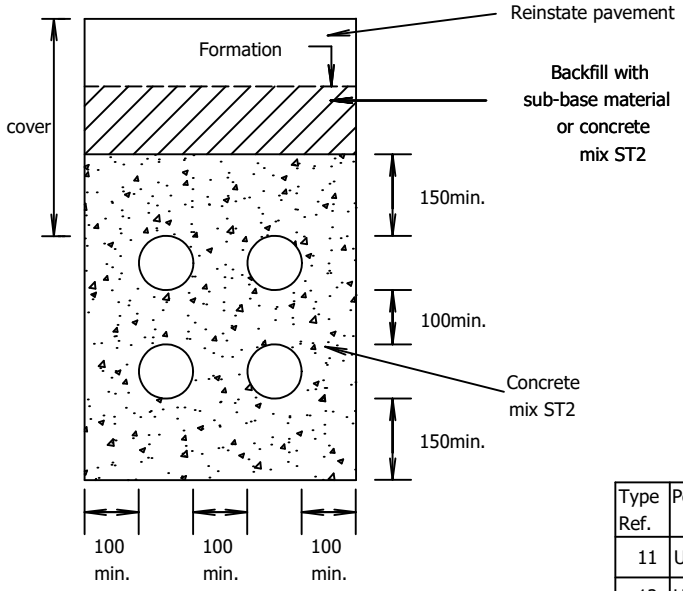
TYPE 11



TYPE 13



TYPE 12



TYPE 14

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. This drawing refers to single ducts in trench in all-purpose roads and shall be read in conjunction with Appendix 5/2 and the pipe schedules.
3. The concrete cover to ducts Type 13 and 14 shall extend to the sides of the trench.
4. Ducts under carriageways shall be fitted with bellmouths.
5. Ducts under carriageways shall be provided with precast concrete marker blocks at finished surface level, except where they terminate in chambers.
6. Slack in drawrope min. 1000 to be coiled under marker block.
7. Identification tape shall be 150 wide x 100 micron thick, colour yellow with black inscription, as described in the Appendix 5/2.
8. Reinstatement requirements are as stated in Appendix 7/2.
9. Ducts 'purpose' inscriptions and self-colouring requirements shall be as described in Appendix 5/2.
10. For required diameter of ducts and minimum cover see Appendix 5/2.

Type Ref.	Permitted Types to SHW Table 5/2
11	UPVC
12	UPVC
13	Clayware to BS 65:1991 "ES"; UPVC
14	Clayware to BS 65:1991 "ES"; UPVC

Rev	Detail	By	Date

Revisions

Original Version		Preliminary	
		For comment	
Drawn: RS		For tender	
Design: RS		For construction	✓
		As constructed	
Date: Jan 2018		Other	

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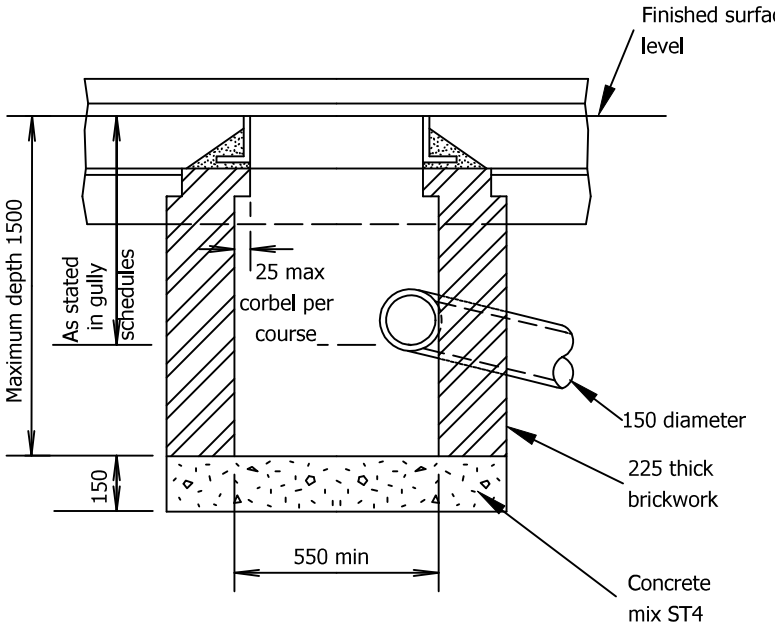
Project Name
Highway Works Designs Series 500

Drawing Title
Service Ducts - Multi-way Duct Trench & Bedding

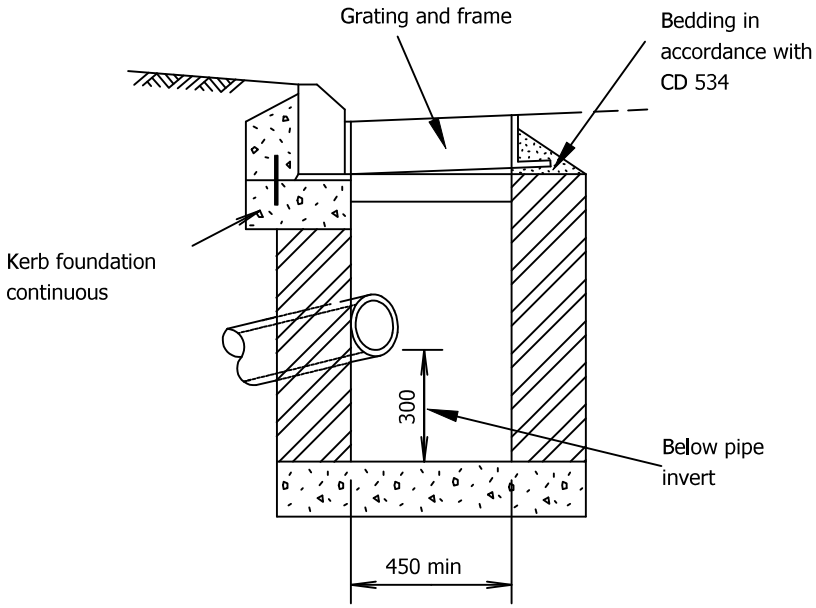
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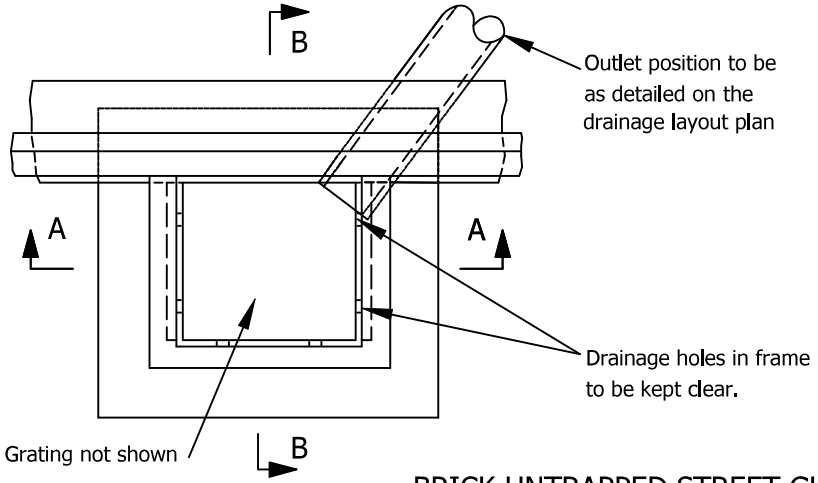
A4



Section A-A



Section B-B



BRICK UNTRAPPED STREET GULLY

NOTES

1. All dimensions are in millimetres.
2. Gully walls to be constructed with Class B clay engineering bricks to BSEN 771-1:2011+A1:2015 with designation (i) mortar.
3. Brickwork adjustment course if required shall be below any corbelling.
4. For details of gully grating and frame see the gully schedules.
5. For use only in particular locations where precast concrete gully cannot be constructed.
6. Backfilling shall be to Clause 508.6.

Rev	Detail	By	Date
C1	Amended reference HA 104/09 to CD 534	MM	16/08/2022
C0	Original Drawing	RL	04/10/2019

Revisions

Original Version	Preliminary	
	For comment	
Drawn: RL	For tender	
Design: RL	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

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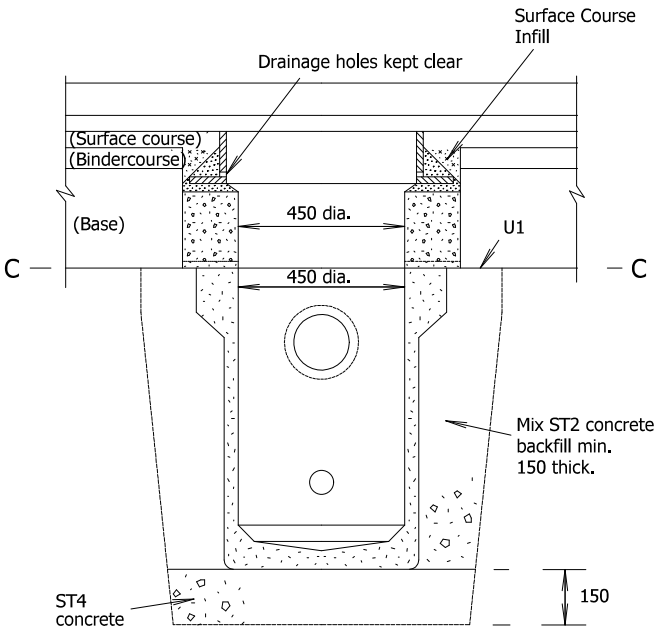
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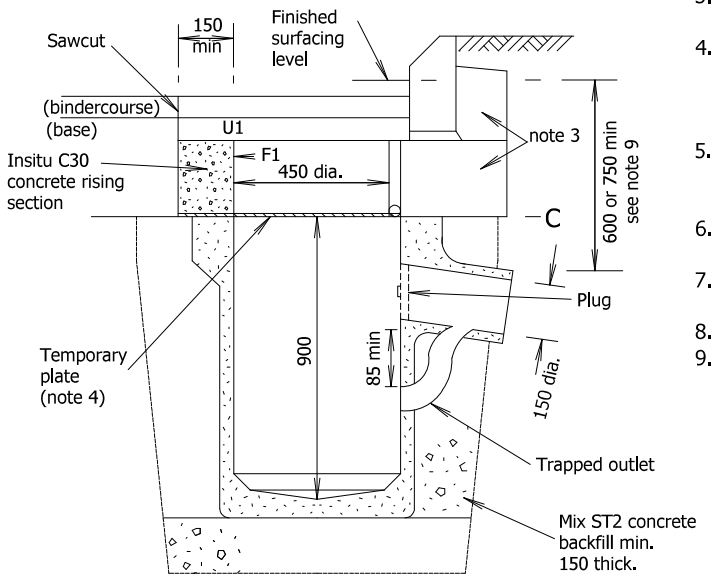
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Brick Gully - Type 3

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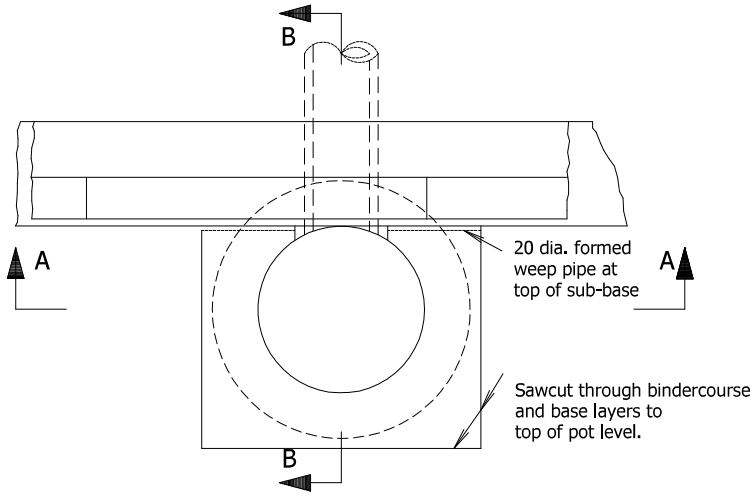
Drawing No	Rev
05.65	C1



SECTIONAL ELEVATION A-A.
(completed installation)



SECTIONAL ELEVATION B-B
(during construction)



PLAN
(at top of basecourse - prior to installing grating and frame)

NOTES

1. All dimensions are in millimetres.
2. For details of gully grating and frame see the gully schedules.
3. Construction at kerb either side of gully position as per Highway Works Detail Drg. No. 11.01.
4. Temporary plate 10 thick mild steel to be fixed on top of gully pot prior to laying base and binder course layers continuous over gully position. Plate shall be removed before casting rising section.
5. Temporary plate, pavement materials over plated area, and the removal works shall be deemed to be Temporary Works for measurement purposes.
6. Precast concrete gully pot shall be to BS 5911-6:2004 + A1:2010.
7. Surface course material infill outside of frame shall be compacted with pneumatic tools.
8. Frames shall be bedded in accordance with CD 534.
9. The minimum depth from the top of the grating to the top of the gully outlet is to be 750mm when the connection is under the carriageway and 600mm elsewhere.

SUB-TYPE	APPLICATION
2A	New gully construction
2B	Existing gully pot, renewal of construction above level C-C.

C1	Replaced ref HA 104/09 with CD 534. Removed previous notes 3 and 8. New note 9 & minimum depth requirements added. Trapped outlet & plug details added.	MM	27/09/2022
C0	Original Drawing	RL	24/10/2019
Rev	Detail	By	Date
Revisions			

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		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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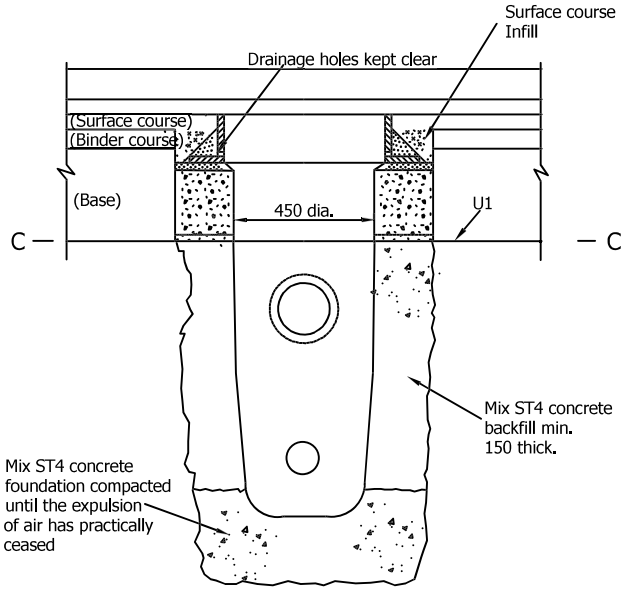
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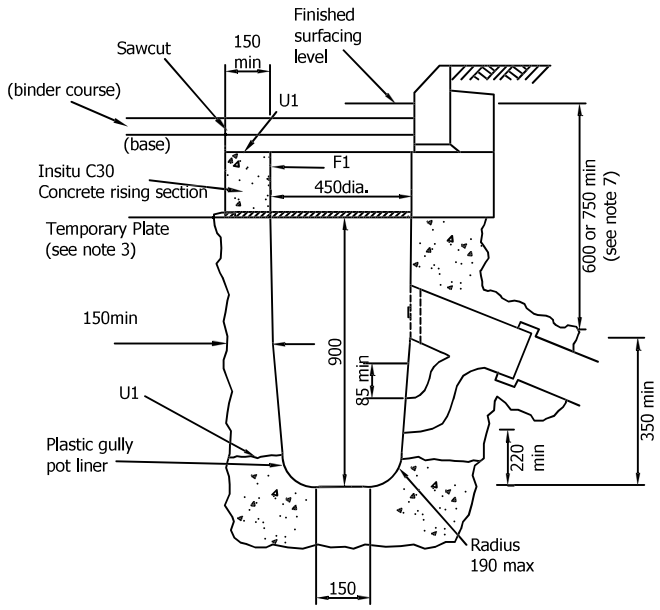
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Precast Concrete Gully - Type 2

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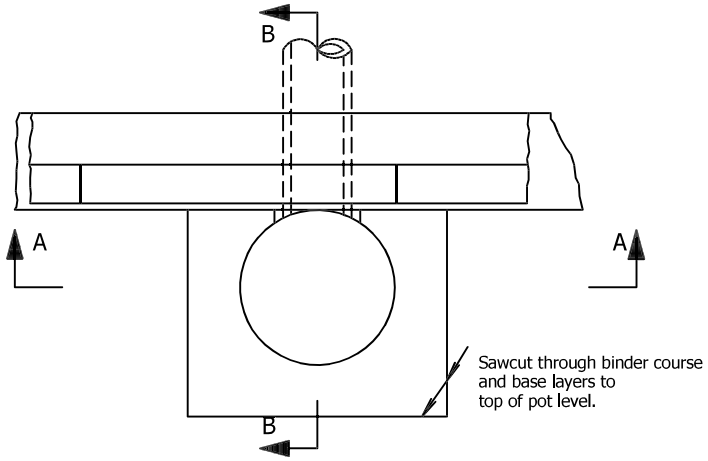
Drawing No	Rev
05.67	C1



SECTIONAL ELEVATION A-A.
(completed installation)



SECTIONAL ELEVATION B-B
(during construction)



PLAN
(at top of bindercourse - prior to installing grating and frame)

SUB-TYPE	APPLICATION
4A	New gully construction
4B	Existing gully pot, renewal of construction above level C-C.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Requirements for gully grating and frame - see the gully schedules.
3. Temporary plate 10 thick mild steel to be fixed on top of gully pot prior to laying base and binder course layers continuous over gully position. Plate shall be removed before casting rising section.
4. Temporary plate, pavement materials over plated area, and the removal works shall be deemed to be Temporary Works for measurement purposes.
5. Surface course material infill outside of frame shall be compacted with pneumatic tools.
6. Frames shall be bedded in accordance with CD 534.
7. The minimum depth from the top of the grating to the top of the gully outlet is to be 750 when the connecting pipe is under a carriageway or a hard shoulder and 600 elsewhere.

Rev	Detail	By	Date
C1	Amended reference HA 104 to CD 534. Pot depth increased from 750mm to 900mm.	MM	27/09/2022
C0	Original Drawing	RL	02/07/2019

Revisions

Original Version	Preliminary	
	For comment	
Drawn: RL	For tender	
Design: RL	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

Checked by:- Digitally signed by Simon cartledge Date: 2022.09.28 10:52:57 +01'00'

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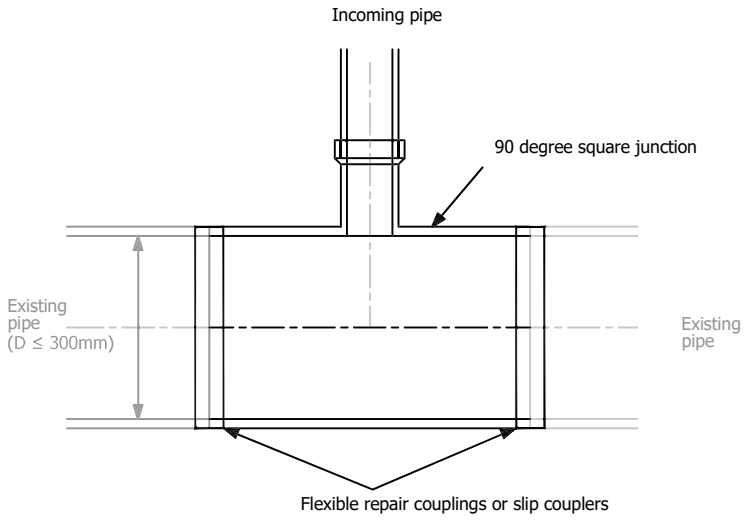
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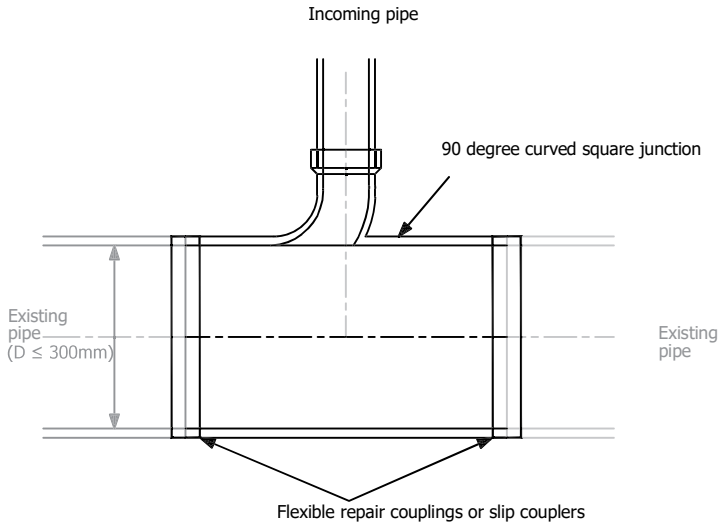
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Insitu Concrete Gully - Type 4

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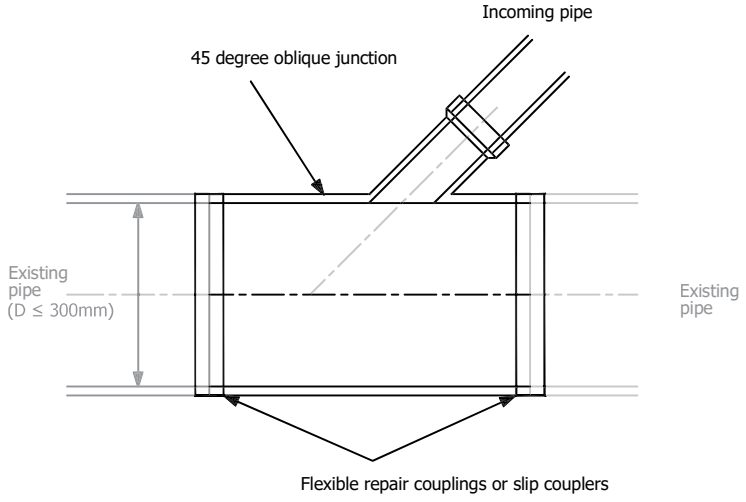
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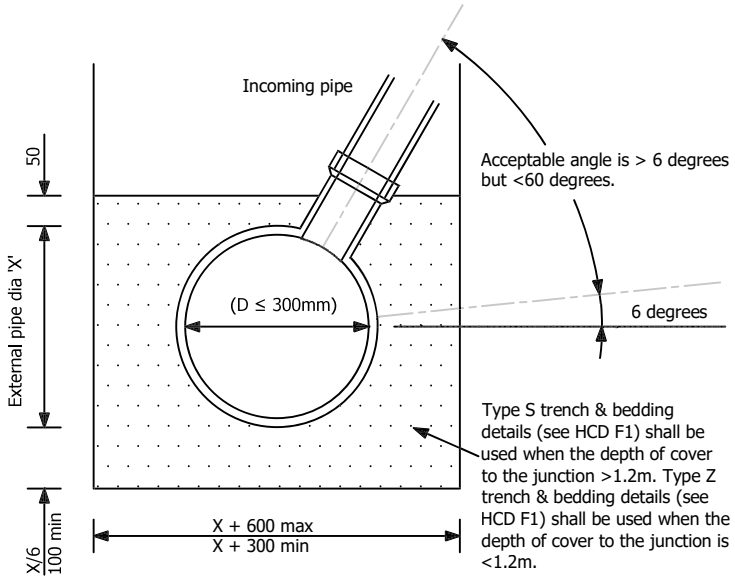
Plan through connection made by inserting a 90 degree square junction into the existing drain



Plan through connection made by inserting a 90 degree curved square junction into the existing drain



Plan through connection made by inserting a 45 degree oblique junction into the existing drain



Cross-section through existing drain

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Connections to existing pipes with diameter less than or equal to 300mm shall be made by the insertion of a 45 degree oblique or 90 degree square or 90 degree curved square junction into the existing drain pipeline.
3. The section of existing drain shall be removed by cutting with pipe cutter or disc saw.
4. The inserted junction shall be connected with flexible repair couplings or slip couplers.
5. The junction strength classification shall match that of the existing pipe.

Rev	Detail	By	Date
Revisions			

Original Version		Preliminary	
		For comment	
Drawn: SJC		For tender	
Design: SJC		For construction	✓
		As constructed	
Date: June - 2019		Other	

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Date: 2019.08.16 15:00:17 +01'00'

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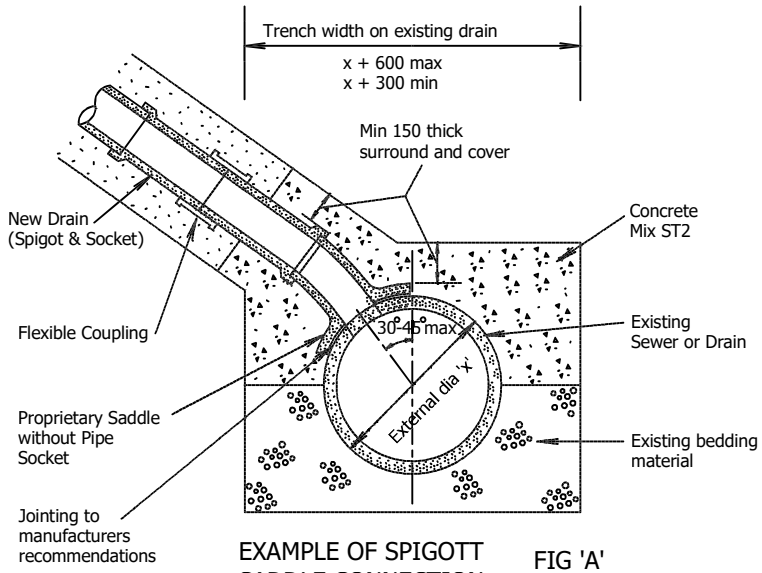
Project Name
Highway Works Details
Series 500

Drawing Title
Connecting to Existing Piped Drain with diameter equal to or less than 300mm

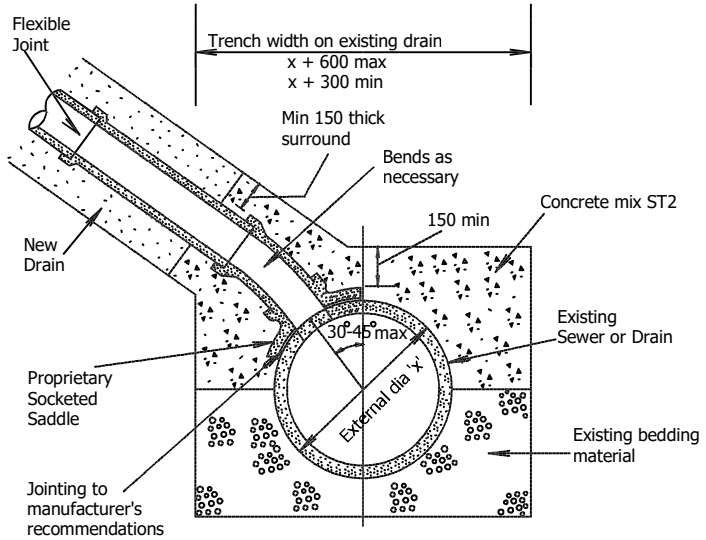
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Drawing No	Rev
05.70	C0

A4



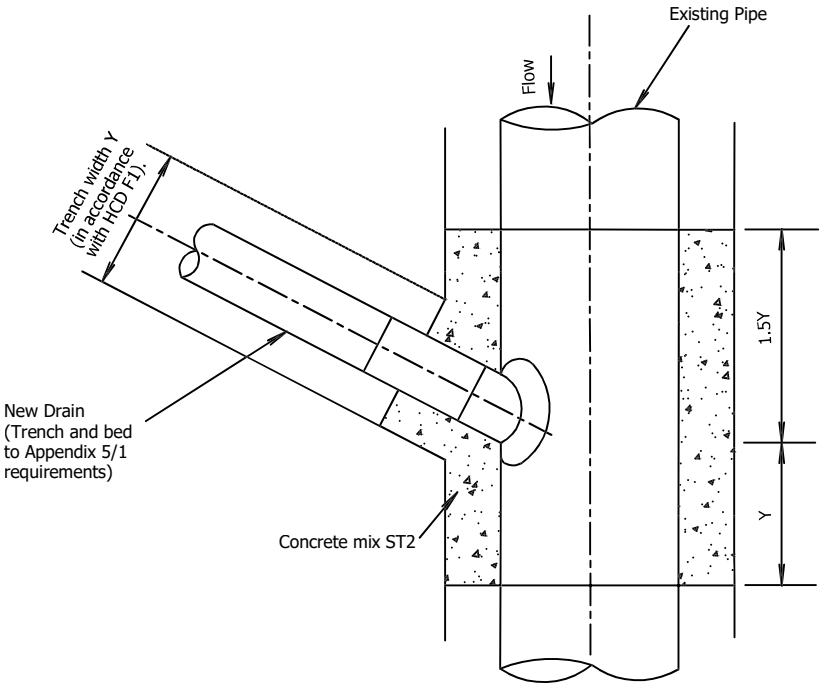
EXAMPLE OF SPIGOTT SADDLE CONNECTION FIG 'A'



EXAMPLE OF SOCKETED SADDLE CONNECTION FIG 'B'

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Saddle connections can only be used on existing drains with diameters >300mm and when the connecting pipe's diameter is ≤ half the dia of the existing drain. Where a connection is required onto a 3rd party drainage asset, the method and type of connection is to be determined through consultation with the asset owner prior to the commencement of works on site. New saddle connections must be compatible with the size and types of pipe being connected.
3. Connections made with saddle fittings should be made by cutting and safely removing a core from the existing pipe and jointing the saddle fitting to the pipe, in accordance with the manufacturers instructions, to ensure a watertight joint. The connecting pipe should not protrude into the bore of the existing drain.
4. Oblique saddle preferred.
5. Bends as stated in pipe schedules.
6. New drain pipe trench and bedding alternatives are described in Appendix 5/1.
7. New drain pipes using beds Type Z shall have flexible joint in concrete bed and surround to the Overseeing Organisation's approval, positioned as directed.



PLAN DIAGRAM - EXAMPLE OF OBLIQUE SADDLE CONNECTION SHOWING LENGTH OF CONCRETE HAUNCH AND COVER TO EXISTING PIPES ABOUT THE CONNECTION

Rev	Detail	By	Date
	Revisions		

Original Version		Preliminary	
		For comment	
Drawn: SJC		For tender	
Design: SJC		For construction	✓
		As constructed	
Date: June - 2019		Other	

Checked: Digitally signed by Geoff Walker Date: 2019.08.01 13:39:55 +01'00'

Approved by:- (Drawing NOT approved if this box is empty) Digitally signed by Mike Smith Date: 2019.08.16 15:01:37 +01'00'

Staffordshire County Council working with amey

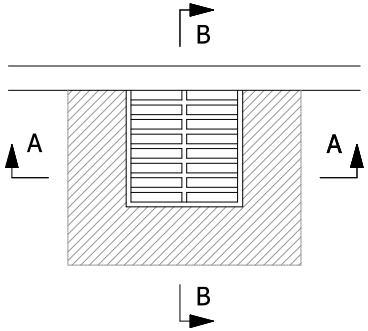
Project Name
Highway Works Details Series 500

Drawing Title
Connecting to Existing Piped Drain with diameter greater than 300mm

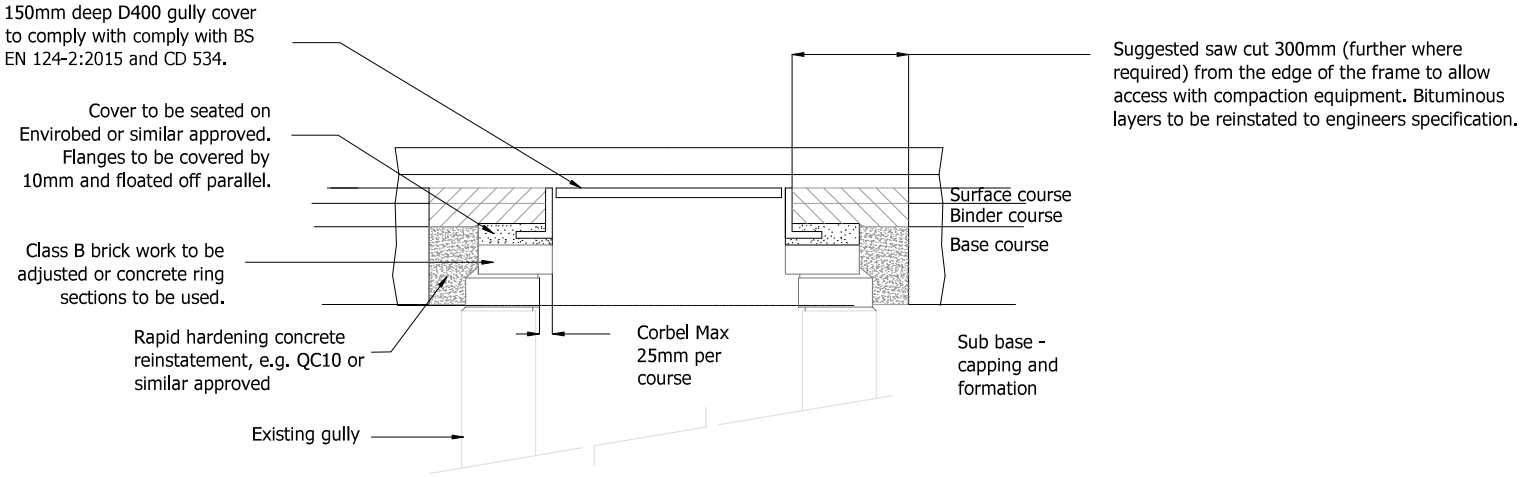
Grid reference :		
Original Drawing Size : A4	Dimensions : mm	
Scale : NTS	Copyright © Amey SCC	

Drawing No	Rev
05.71	C0

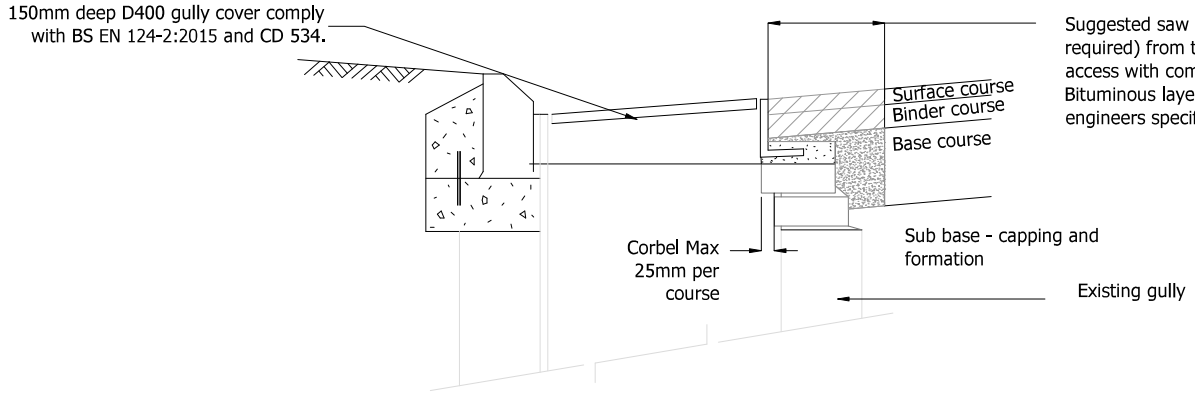
A4



PLAN VIEW



SECTION A - A



SECTION B - B

NOTES

1. Existing pavement to be saw-cut.
2. Vertical faces of pavement and ironwork shall be painted with either bond coat or approved edge sealant as described in Appendix 7/2 and 7/4.

Rev	Detail	By	Date
C1	Amended reference HA104/09 to CD534	MM	29/09/2023

Revisions

Original Version	Preliminary	
	For comment	
Drawn: RS	For tender	
Design: RS	For construction	✓
	As constructed	
Date: Aug 2019	Other	

Checked by:-
Digitally signed by Farrington, Rose (Place)
Date: 2023.10.20 15:28:46 +01'00'

Approved by:- (Drawing NOT approved if this box is empty)
Digitally signed by Smith, Michael S (Place)
Date: 2023.10.24 09:31:25 +01'00'

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Project Name
Highway Works Details
Series 500

Drawing Title
Gully Cover Reinstatement

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

Drawing No	Rev
05.72	C1

A4