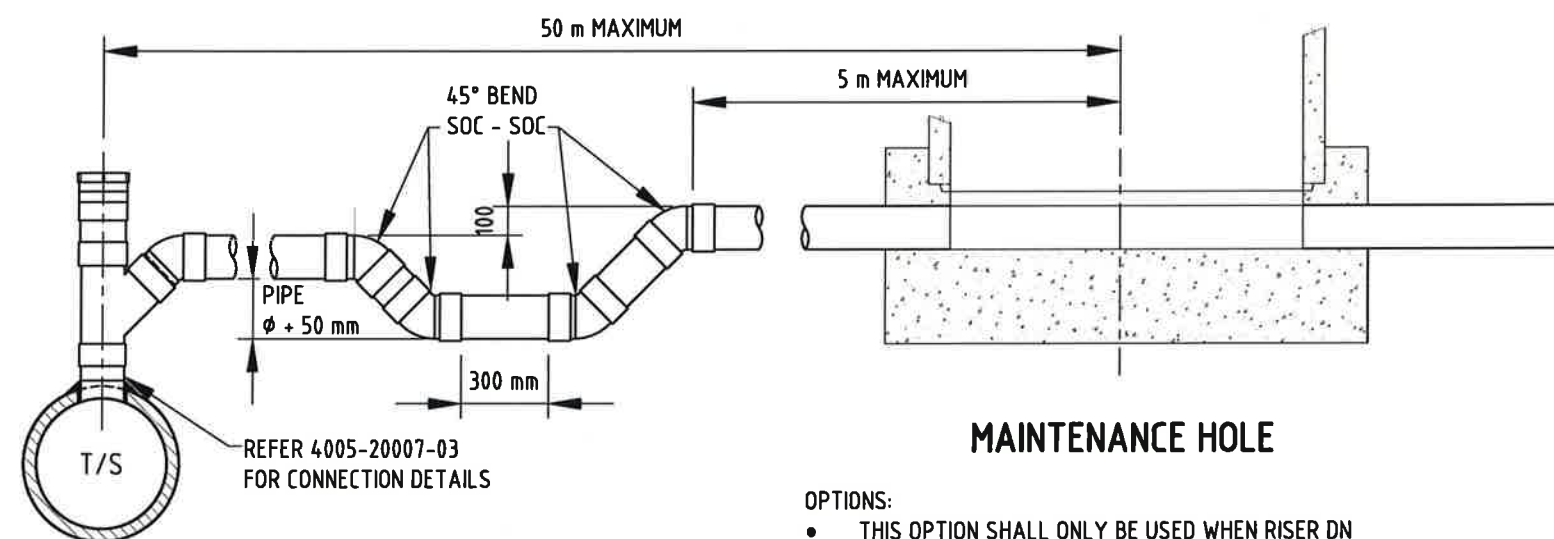


MAINTENANCE
HOLE

MAINTENANCE
SHAFT

NOTES:



1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. WATER SEALS:
 - WATER SEALS SHALL BE CONSTRUCTED ON BRANCH SEWERS UP TO AND INCLUDING DN375, WHICH FLOW INTO TRUNK SEWERS DN450 AND LARGER.
 - WATER SEALS SHALL BE LAID AT A FLAT GRADE. THE REMAINDER OF THE SEWER SHALL BE LAID ON THE DESIGNED GRADE.
 - OPTIMUM WATER SEAL DEPTH SHALL BE PIPE DIAMETER + 50 mm FOR ALL PIPE DIAMETERS.
 - WATER SEALS CAN BE FACTORY FABRICATED FROM PIPE SECTIONS (TO THE CONFIGURATION SHOWN) PARTICULARLY WHERE THE USE OF STANDARD BENDS RESULTS IN THE OPTIMUM WATER SEAL DEPTH BEING EXCEEDED.
3. JUNCTION OF SEWERS:
 - FOR BRANCH SEWERS UP TO AND INCLUDING DN300 THE JUNCTION OF SEWERS SHALL BE CONSTRUCTED 'TOP TO TOP'. (IN SPECIAL CIRCUMSTANCES AND DEPENDING ON SEWAGE FLOWS, THE SA WATER REPRESENTATIVE MAY DIRECT THAT THE JUNCTION BE CONSTRUCTED 'FLOW-LINE TO FLOW-LINE'.)
 - FOR BRANCH SEWERS LARGER THAN DN300 THE JUNCTION OF SEWERS SHALL BE CONSTRUCTED 'FLOW-LINE TO FLOW-LINE'.
4. PIPE MATERIALS:
 - APPROVED UPVC SOLVENT WELD PIPES.
 - APPROVED UPVC RIBBED PIPES FITTED WITH DUAL RUBBER RINGS AT EACH JOINT.
 - OTHER APPROVED PIPE MATERIALS (EG. VITREOUS CLAY AND CONCRETE PIPES).

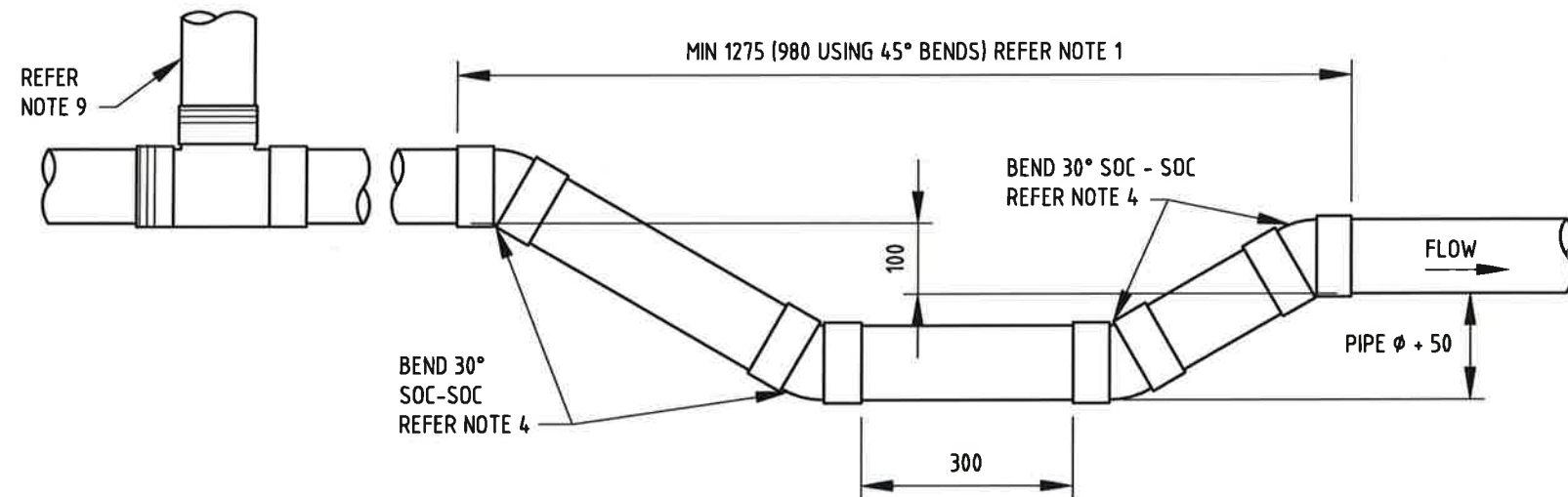


MAINTENANCE HOLE

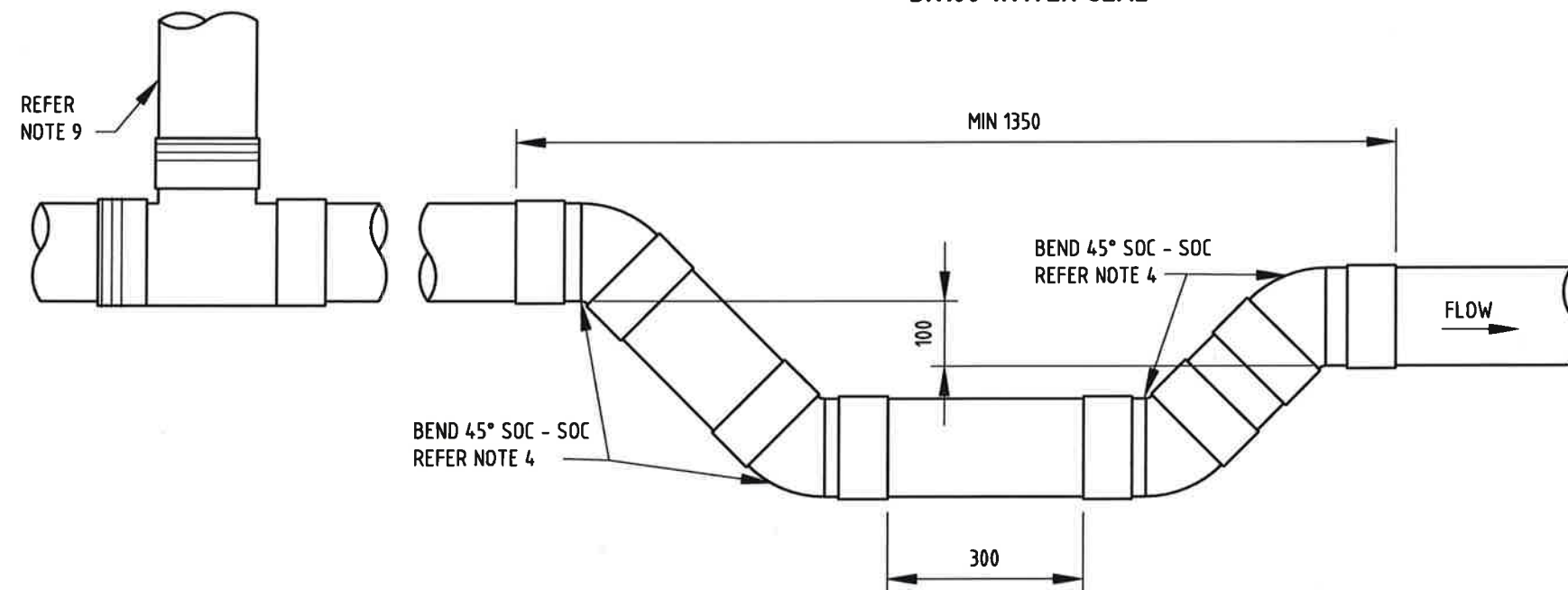
OPTIONS:

- THIS OPTION SHALL ONLY BE USED WHEN RISER DN \leq 50% OF TRUNK SEWER DN
- MS OR MH FOR DN150 AND DN225 BRANCH SEWERS
- MH FOR DN300 AND DN375 BRANCH SEWERS

REVISION PANEL					DESIGN PANEL		 <p>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</p>	SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL WATER SEAL ASSEMBLY DETAILS BRANCH SEWER MAIN INTO TRUNK SEWER MAIN			A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORISED:	SIGNATURE:		TOTAL SHEETS:			SHT SIZE	REVISION
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	DESIGNED: 03/08/15 RJP	AUTHORISED: 31/03/16 T.GALEK		SUPERSEDES: 96-0059-01 (H1)			DRAWING NUMBER	
					DRAWN: 25/09/15 MS	SIGNATURE:		4005-20007-01			PREFIX	SHEET
					REVIEWED: 21/03/16 TG							




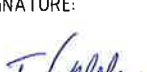
DN100 WATER SEAL



DN150 WATER SEAL


NOTES:

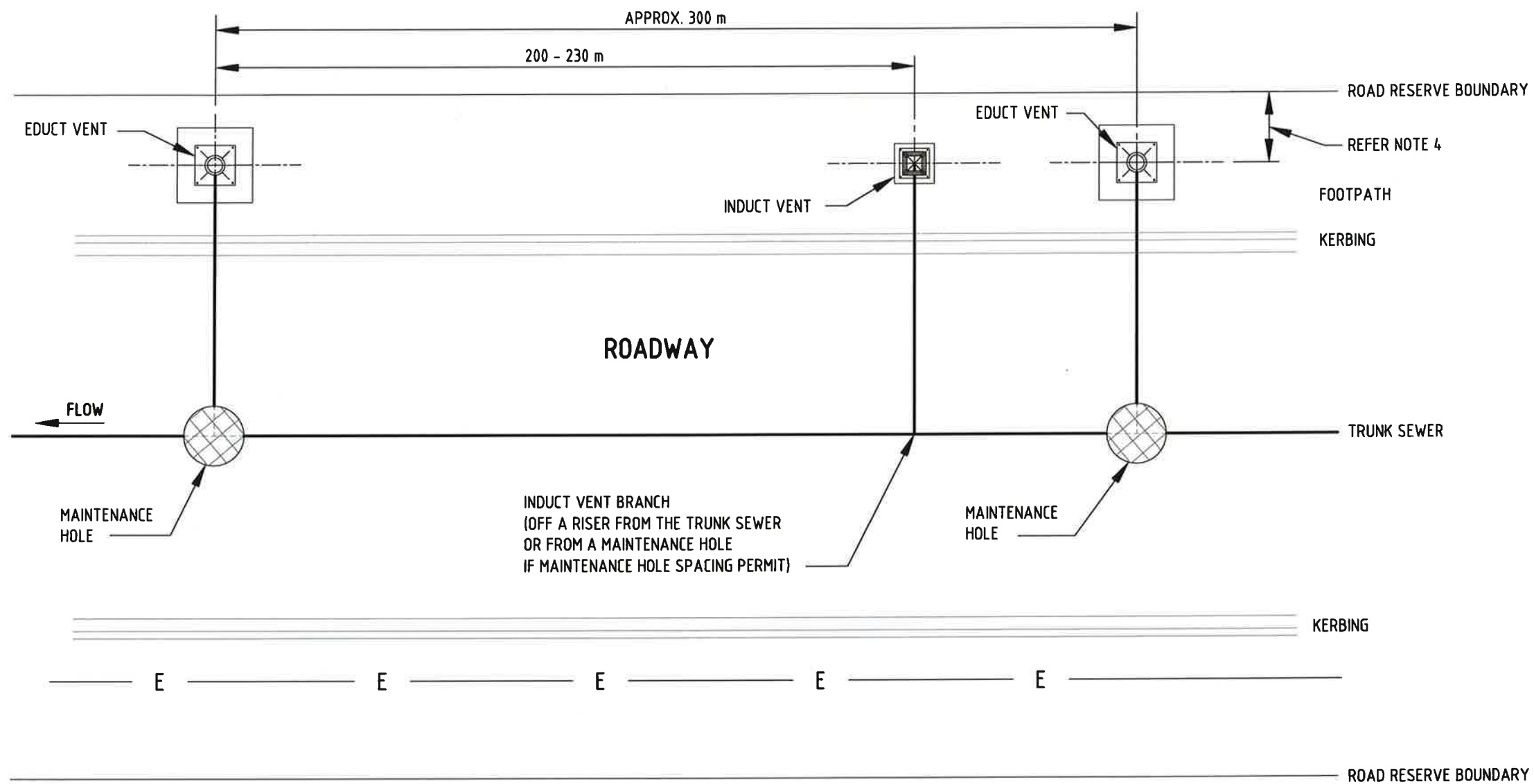
1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. A WATER SEAL SHALL BE CONSTRUCTED ON ALL CONNECTIONS WHICH FLOW INTO THE SEWERS DN450 AND LARGER.
3. THE WATER SEAL SHALL BE CONSTRUCTED ADJACENT AND DOWNSTREAM OF THE CONNECTION IP.
4. THE WATER SEAL SHALL BE LAID AT A FLAT GRADE. THE REMAINDER OF THE CONNECTION SHALL BE LAID AT THE DESIGNED GRADE.
5. REFER 4005-20006-03 FOR MINIMUM CONNECTION GRADE.
6. OPTIMUM WATER SEAL DEPTH SHALL BE PIPE DIAMETER + 50 FOR ALL PIPE DIAMETERS.
7. 45° BENDS SHALL ONLY BE USED WHERE SPACE IS LIMITED AND WHERE APPROVED BY THE SA WATER REPRESENTATIVE.
8. CONNECTION LENGTH SHALL NOT EXCEED 30 m.
9. REFER 4005-20006-02 FOR INSPECTION POINT CONSTRUCTION DETAIL.
10. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTE OTHERWISE.

REVISION PANEL						DESIGN PANEL		<div><p>SA Water</p><p>Government of South Australia</p></div> <div><p>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</p></div>	SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL WATER SEAL ASSEMBLY DETAILS PROPERTY CONNECTION INTO TRUNK SEWER MAIN				<div><div>A3</div><div>SHT SIZE</div></div> <div>1</div> <div>REVISION</div>
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORISED:	DESIGNED: 03/08/15 RJP	AUTHORISED: 31/03/16 T.GALEK		TOTAL SHEETS:				
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					SIGNATURE:	REVIEWED: 21/03/16 TG			DRAWING NUMBER 4005-20007-02				
1	31/03/16	MS	2016 STANDARDS REVIEW	TG					PREFIX NUMBER SHEET				



1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. USE ALTERNATIVE ORIENTATION OPTION WHERE DEPTH IS INSUFFICIENT TO ACHIEVE THE PREFERRED OPTION, AND WHERE APPROVED BY THE SA WATER REPRESENTATIVE.
3. METHOD SHALL NOT BE USED ON PLASTILINED PIPES.
4. SIMILAR DETAILS FOR VC AND RCJ SEWERS.
5. TEMPORARY ISOLATION OF TRUNK SEWER (OR DIVERSION OF FLOWS) MAY BE NECESSARY DURING LIVE INSTALLATIONS.
6. DN100 CONNECTIONS ILLUSTRATED. DN150 IS AN APPROVED OPTION.
7. REFER SECTION 6 FOR CONNECTION CONSTRUCTION.
8. ALL DIMENSIONS IN MILLIMETRES.

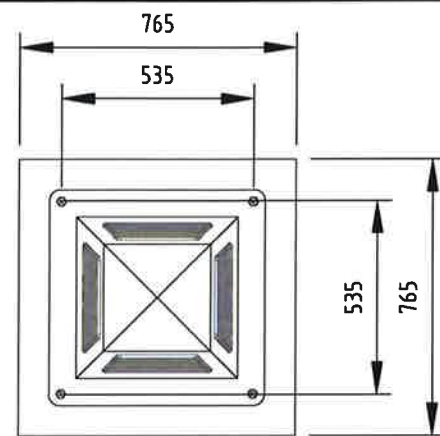
REVISION PANEL						DESIGN PANEL		<div><p>SA Water</p><p>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</p></div>	SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL NEW PROPERTY CONNECTION OFF EXISTING VC & RCRJ SEWER DN375 & LARGER			A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV	DESIGNED: 03/08/15	AUTHORISED: 31/06/16		TOTAL SHEETS:				
					AUTHORISED:	RJP	T.GALEK		SUPERSEDES: 94-0162-01 (K12)				
					SIGNATURE:	DRAWN: 25/09/15	SIGNATURE:		DRAWING NUMBER				
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1	31/03/16	MS	2016 STANDARDS REVIEW	TG		REVIEWED: 21/03/16	TG	PREFIX NUMBER SHEET					



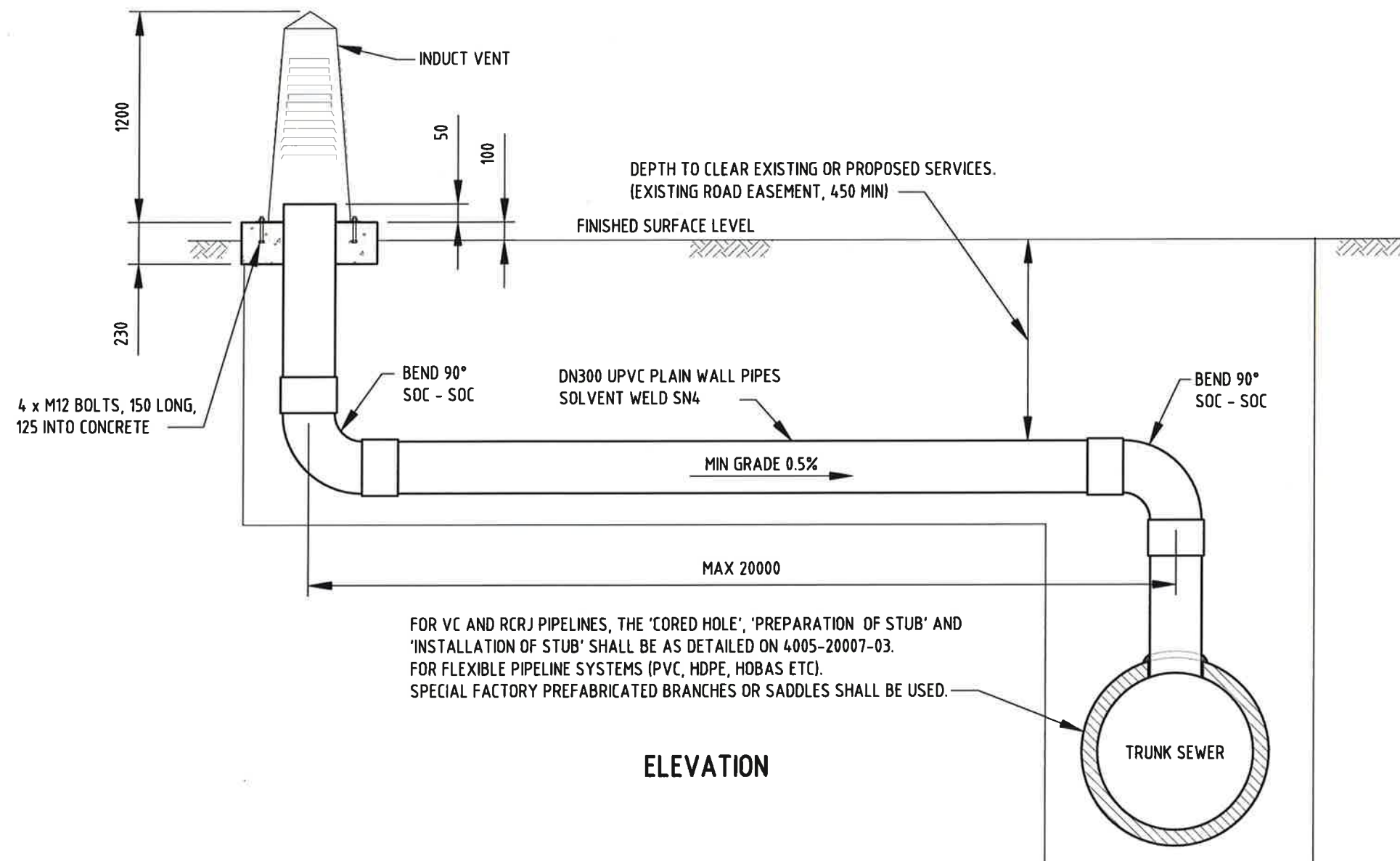
NOTES:

1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. INDUCT AND EDUCT VENTS:
 - SHALL BE USED ON ALL TRUNK SEWERS DN450 AND LARGER, UNLESS OTHERWISE DIRECTED BY SA WATER REPRESENTATIVE,
 - SHALL BE SITED IN THE LEAST OBTRUSIVE LOCATION, GIVING DUE REGARD TO THE GENERAL STREETScape.
3. INDUCT VENTS (REFER 4005-20007-05)
 - CAN BE SITED ON EITHER SIDE OF THE ROAD RESERVE PROVIDING THEY ARE WELL CLEAR OF ALL UNDERGROUND SERVICES (INCLUDING SAPN, GAS, TELSTRA, OPTUS ETC), TREES, DRIVEWAYS AND ANY OTHER FACILITIES.
 - SHALL BE PREFERABLY ALIGNED WITH THE SIDE BOUNDARY OF ADJACENT ALLOTMENTS, REMOTE FROM DRIVEWAYS.
4. EDUCT VENTS, (REFER 4005-20007-06):
 - SHALL BE SITED ON THE OPPOSITE SIDE OF THE ROAD RESERVE TO SAPN OVERHEAD MAINS (OR UNDERGROUND DISTRIBUTION CABLES) .
 - WHERE THIS IS NOT POSSIBLE APPROVAL SHALL BE SOUGHT FROM THE SA WATER REPRESENTATIVE FOR THE VENTS TO BE LOCATED ON THE SAME SIDE AS THE SAPN INFRASTRUCTURE.
 - SHALL ALWAYS BE SITED WELL CLEAR OF ALL OVERHEAD AND UNDERGROUND SERVICES (INCLUDING SAPN, GAS, TELSTRA, OPTUS ETC),
 - SHALL BE WELL CLEAR OF ALL TREES, DRIVEWAYS AND ANY OTHER FACILITIES. PREFERABLY THEY SHALL BE ALIGNED WITH THE SIDE BOUNDARY BETWEEN ADJACENT ALLOTMENTS, REMOTE FROM DRIVEWAYS.
 - BOUNDARY OFFSET VARIABLE DEPENDING ON COMMON SERVICE TRENCH AND OTHER SERVICES WITHIN THE FOOTPATH AREA.

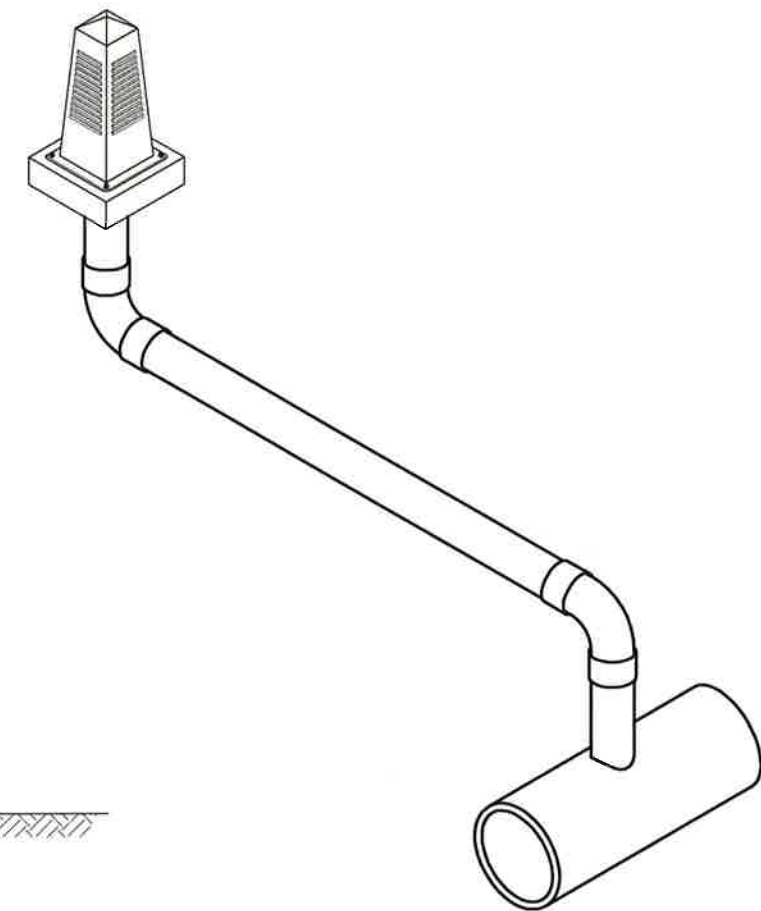
REVISION PANEL					DESIGN PANEL		 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SA WATER STANDARD DRAWINGS		A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV	AUTHORISED:		SEWER CONSTRUCTION MANUAL		SHT SIZE	REVISION
								END EDUCT VENTS			
								SITTING AND SPACING			
								FOR TRUNK SEWER			
1	31/03/16	MS	2016 STANDARDS REVIEW	TG							



PLAN




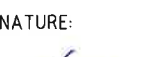
ELEVATION



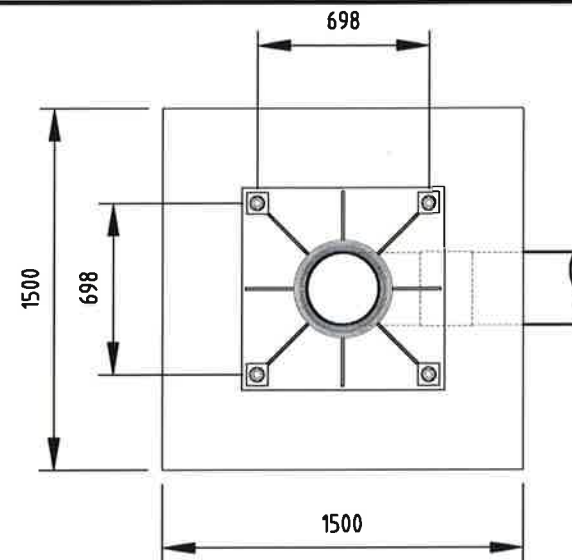
ISOMETRIC

NOTES:

1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. VENT PENETRATIONS NOT PERMITTED INTO PLASTILINED AND HDPE PIPES.
3. HOLDING DOWN BOLTS AND NUTS SHALL BE HOT DIP GALVANISED.
4. REFER 4005-20007-04 FOR POSITIONING OF VENTS.
5. ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL						DESIGN PANEL		<div> SA Water Government of South Australia</div> <div>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</div>	SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL INDUCT VENT GENERAL ARRANGEMENT			<div>A3</div> <div>SHT SIZE</div>	<div>1</div> <div>REVISION</div>
REV	DATE	DRN	DETAILS	APR	CURRENT REV	DESIGNED: 03/08/15	AUTHORISED: 31/03/16		TOTAL SHEETS:			SUPERSEDES: 94-0168-02 (J2)	
					AUTHORISED:	RJP	T.GALEK						
					SIGNATURE:	DRAWN: 25/09/15	SIGNATURE:						
						MS							
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		REVIEWED: 21/03/16	TG				DRAWING NUMBER 4005-20007-05		
											PREFIX	NUMBER	SHEET

Ø300 X 15 m HIGH
STANDARD VENT STACK



BASE DETAILS

LONG LIFE
POLYURETHANE OR BUTYLMASTIC
SEALANT (GRAY)

COMPACTED
LEAD WOOL

VENT
STACK

DETAIL 1

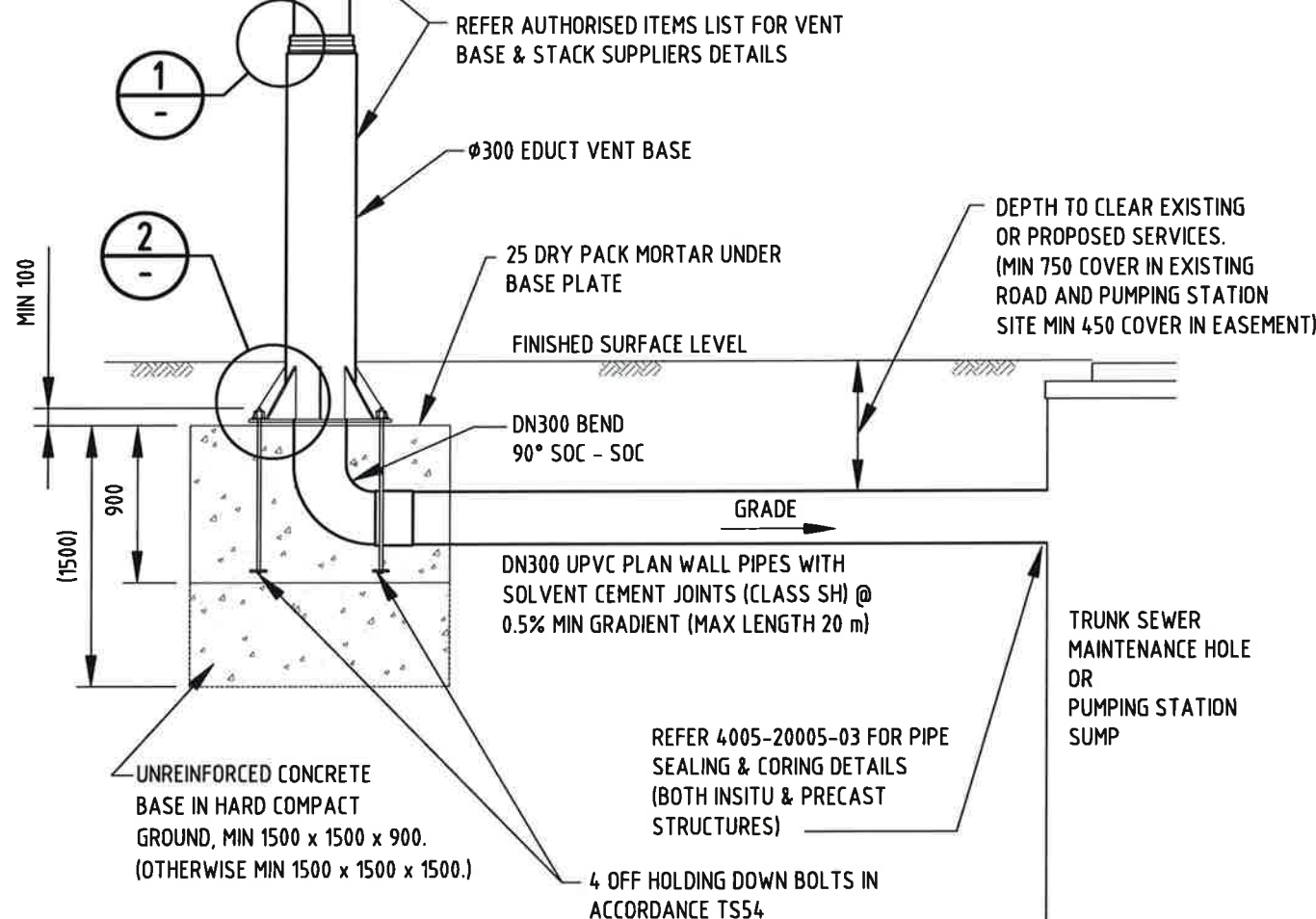
EDUCT
VENT BASE

VENT STACK
TO BE CENTERED
FIRMLY INTO
THE TAPER
BEFORE
COMPACTING
LEAD WOOL

MORTAR
CONCRETE BASE

UPVC PIPE

DETAIL 2



ELEVATION

NOTES:

1. REFER 4005-20002-01 & 4005-20002-02 FOR GENERAL NOTES.
2. VENT PENETRATIONS NOT PERMITTED INTO PLASTILINED & HDPE PIPES.
3. REFER 4005-20007-04 FOR POSITIONING OF VENTS.
4. CLEAR COVER TO HOLDING DOWN BOLT ASSEMBLY SHALL BE MIN. 65 mm.
5. CONCRETE POURED IN SITU SHALL BE MINIMUM GRADE 25.
6. EXCAVATION/ BACKFILL:
 - THE EXCAVATION SHALL BE HORIZONTAL & LEVEL,
 - COMPACTION SHALL MIN. 95% SMDD,
 - COMPACTION DEPTH 150 mm.
 - BACKFILL AROUND CONCRETE BASE SHALL BE MIN. 95% SMDD.
7. CORROSION PROTECTION:
 - BELOW GROUND LEVEL PORTION OF VENT SHALL BE PROTECTED USING PETROLATUM ANTI CORROSION SYSTEM IN ACCORDANCE WITH TS29.
 - ALL NUTS SHALL BE COATED WITH MASTIC AND SEALED WITH RADLOID CAPS FILLED WITH MASTIC.
8. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

REVISION PANEL					DESIGN PANEL		 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL EDUCT VENT GENERAL ARRANGEMENT		A3 SHT SIZE	1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV	AUTHORISED:				TOTAL SHEETS:	
						RJP	T.GALEK			SUPERSEDES: 94-0168-03 (J3)	
						DRAWN: MS	SIGNATURE:			DRAWING NUMBER	
						REVIEWED: 21/03/16	T. Galek			4005-20007-06	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG						PREFIX	NUMBER SHEET