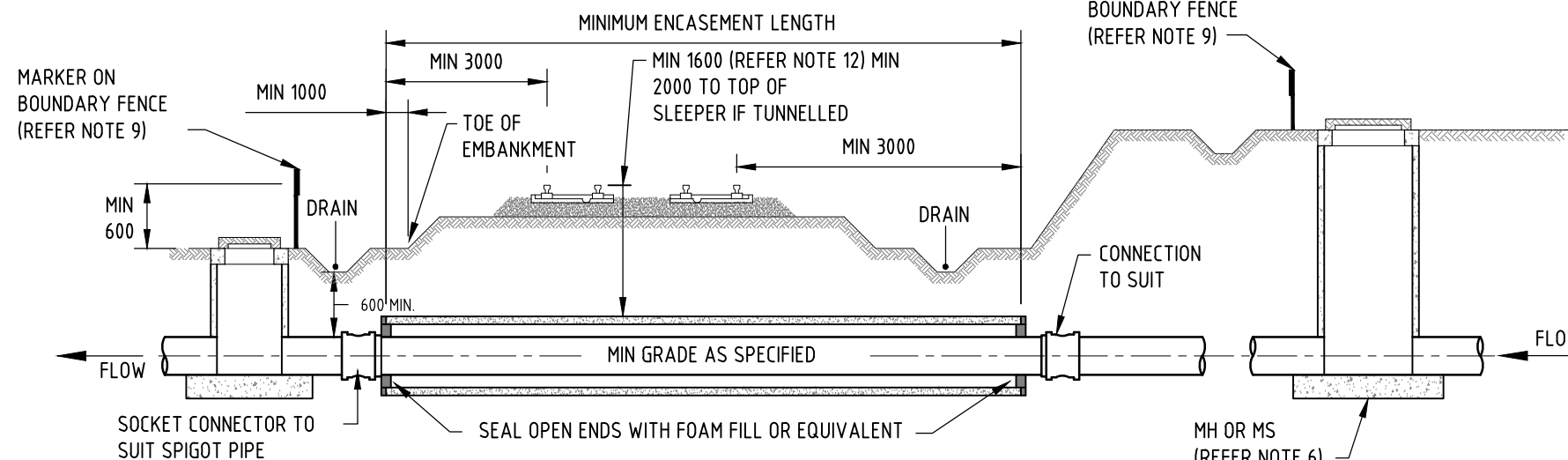


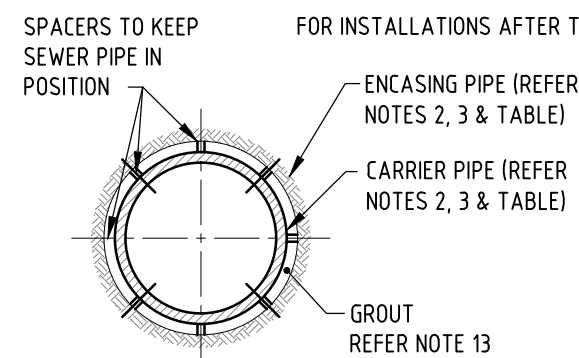
CONCRETE ENCASED METHOD

FOR INSTALLATIONS AFTER TO TRACK CONSTRUCTION



BORED OR JACKED ENCASED PIPE METHOD

FOR INSTALLATIONS AFTER TRACK CONSTRUCTION (REFER SEW-14/15)





TYPICAL SECTION
ENCASING PIPE & SEWER ARRANGEMENTS

BORED & JACKED ENCASED/SEWER PIPE SIZES										
SEWER PIPE (DN)	100	150	225	300	375	400	500	550	650	800
BORED ENCASED PIPE MIN (DN)	300	375	425	500	575	600	700	750	850	1000
JACKED ENCASED PIPE (DN)	N/A					MIN. 1200				

NOTES:

- DESIGN OF THE PIPE CROSSING SHALL BE ON ACCORDANCE WITH AS4799.
- SEWER PIPE**
 - STEEL CEMENT LINED WITH FUSION BONDED PE COATING
 - DI CLASS K9 WITH POLYMERIC LINING
 - PVC CLASS SN8
 - PE CLASS PN12.5
 - GRP CLASS SN5000 MIN.
- HORIZONTAL BORING ENCASED PIPE**
 - REINFORCED CONCRETE CLASS 4 BUTT JOINTED WITH STEEL LOCATING BAND OR MILD STEEL OR GRP PIPE.
- JACKING ENCASED PIPE**
 - REINFORCED CONCRETE CLASS 4 BUTT JOINTED WITH STEEL LOCATING BAND OR GRP JACKING PIPE.
- CONCRETE ENCASED**
 - NO SERVICE CONNECTIONS SHALL BE MADE ALONG ENCASED SECTION OF PIPELINE.
- MH OR MS SHALL BE LOCATED AT LEAST 6000 FROM THE TOE OF EMBANKMENT OR TOP OF CUT.
- FOR DI MAINS, ALL FITTINGS SHALL BE FUSION BOND COATED.
- SEWER PIPE <DN150 CAN BE DIRECTIONALLY BORED USING PE PIPE WITHIN AN ENCASEMENT PIPE WHICH MAY ALSO BE PE.
- MARKERS ABOVE PIPELINE SHALL BE PLACED AT THE POINTS WHERE IT ENTERS AND LEAVES THE PROPERTY.
- PROVIDE CATHODIC PROTECTION AS DIRECTED BY RAILWAY AUTHORITY. PROVIDE ELECTRICAL CONTINUITY AND INSULATION AS SPECIFIED IN DESIGN DRAWINGS.
- MINIMUM COVER FOR ALL PIPELINES BELOW RAILWAY LINES:
 - NOT LESS THAN 1600 BELOW RAIL LEVEL
 - NOT LESS THAN 600 BELOW FORMATION LEVEL
 - ie THE GROUND LEVEL IMMEDIATELY BELOW THE RAILWAY BALLAST
 - NOT LESS THAN 2000 BELOW RAIL LEVEL TO TOP OF TIMBER FOR TUNNELS.
- FOR ELECTRIFIED RAILWAY SYSTEMS PREFERENCE SHALL BE FOR THE USE OF NON-METALLIC PIPES.
- GROUTING MIX RATIO TO BE SAND:CEMENT:WATER (1:1:0.5) BY WEIGHT, USING FINE WELL ROUNDED SAND. PLASTICISERS MAY BE USED.
- ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL					DESIGN PANEL		<div></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 RAILWAY CROSSING TYPICAL DETAILS		<div>A3</div> <div>SHT SIZE</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:			
						DRAWN: 25/09/15 MS		SIGNATURE:	SUPERSEDES: 02-0288-01 (H3)			
					SIGNATURE:	REVIEWED: 21/03/16 TG			DRAWING NUMBER			
1	31/03/16	MS	2016 STANDARDS REVIEW	TG					4005-20008-02			
								PREFIX	NUMBER	SHEET		