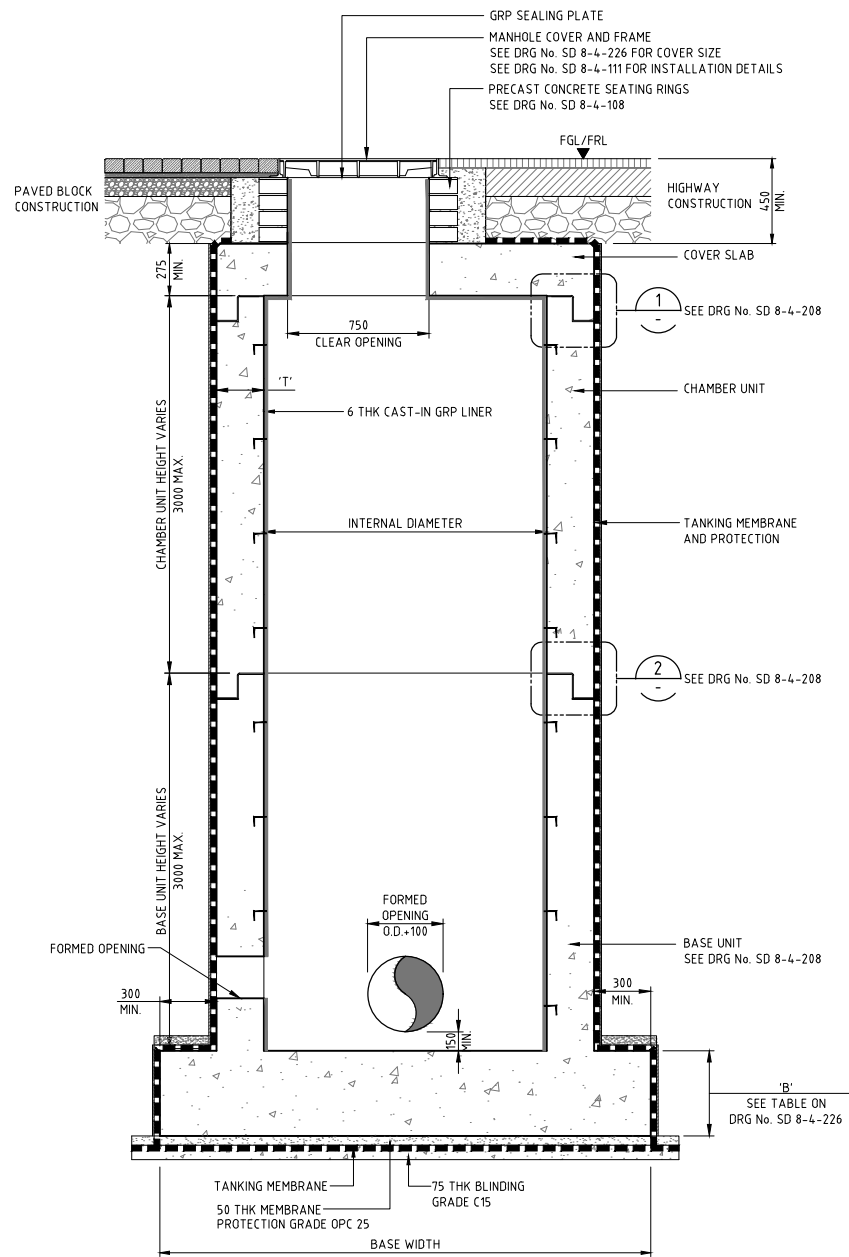
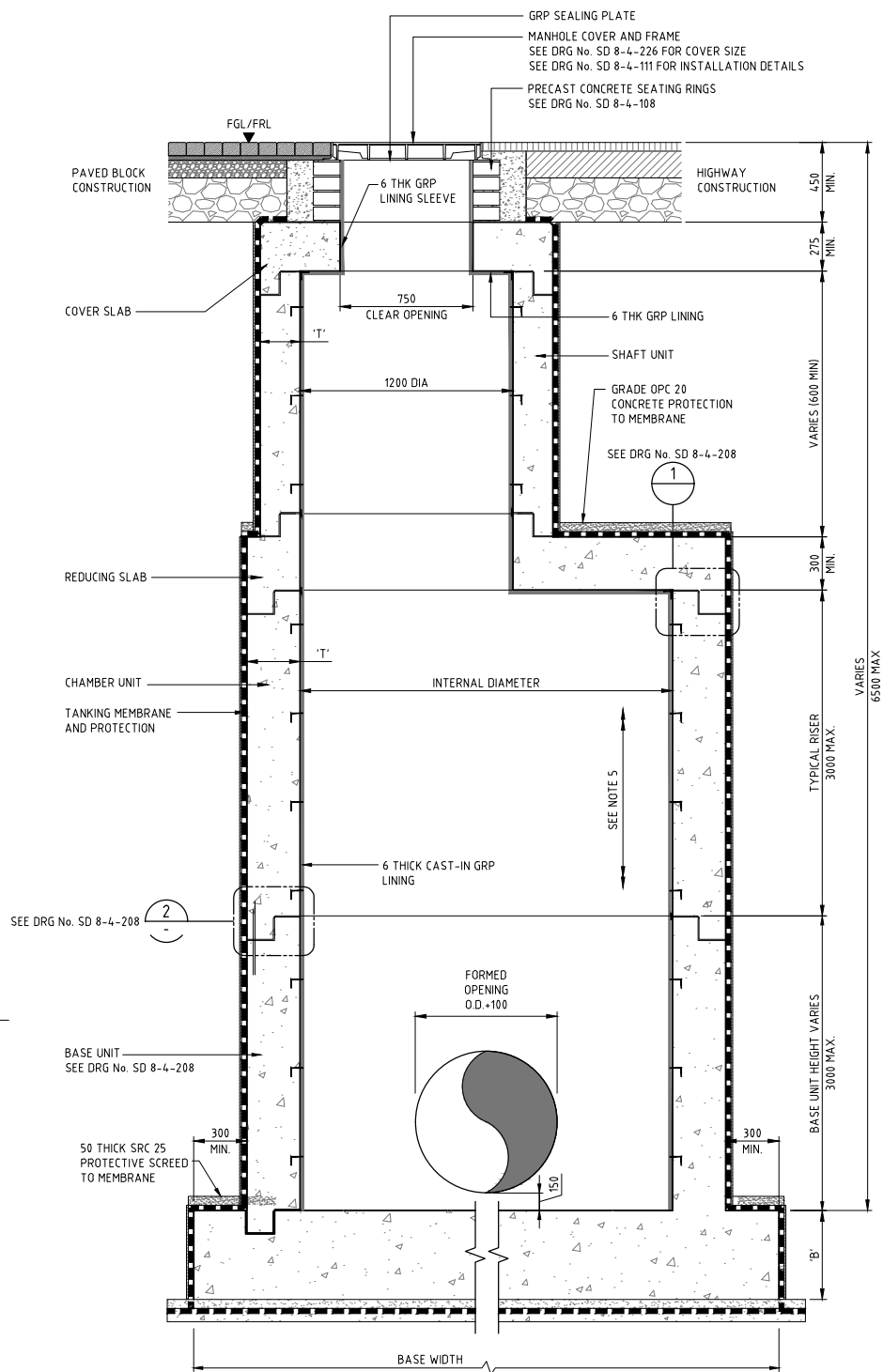




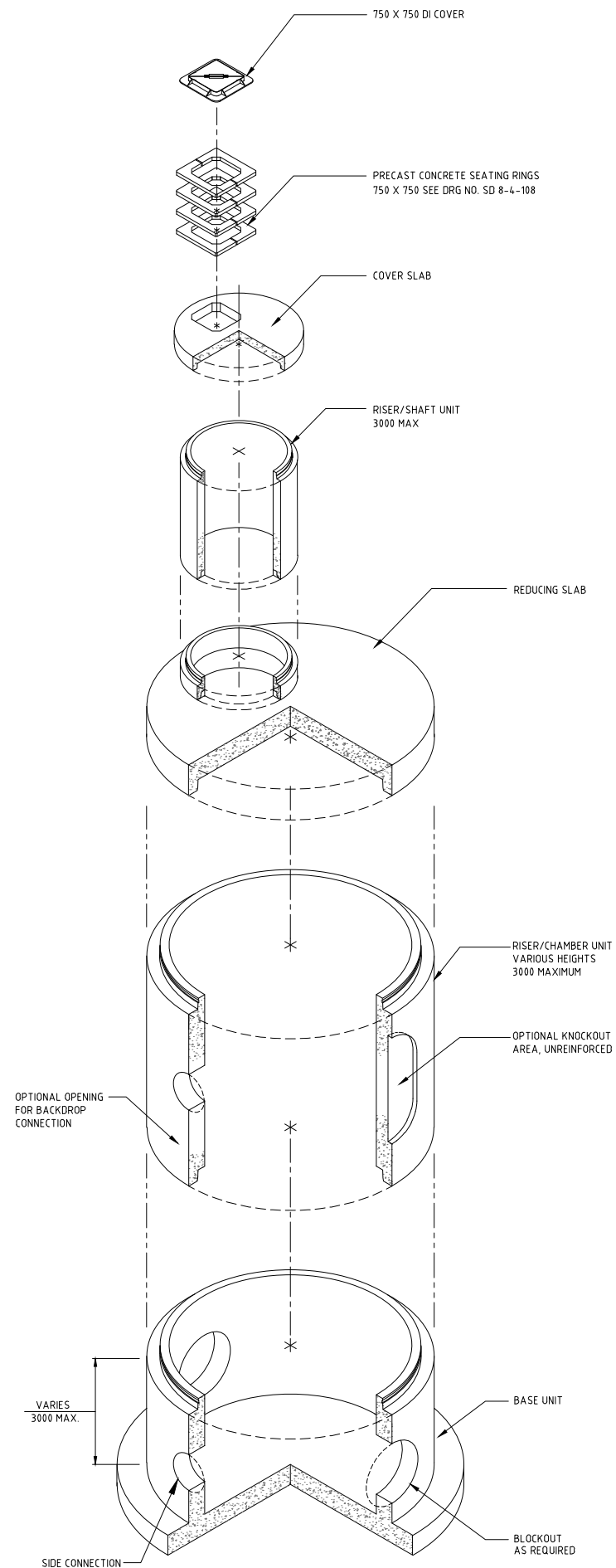
PRECAST MANHOLE



SEPARATE PRECAST CONCRETE BASE OPTION

PRECAST CONCRETE INTEGRAL BASE OPTION

PRECAST MANHOLE WITH REDUCING SLAB



ISOMETRIC VIEW

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT Q.C.S. UNLESS OTHERWISE AGREED WITH THE ENGINEER.
- SEE DRAWING NO. SD 8-4-106 FOR STRUCTURAL NOTES AND DETAILS.
- ALL EXTERNAL FACES OF CONCRETE TO BE TANKED AS SHOWN ON DRG. NO. SD 8-4-103.
- ALL INTERNAL SURFACES OF MANHOLES TO BE LINED WITH GRP LINER AS SPECIFIED.
- HEADROOM BETWEEN BENCHING AND REDUCING SLAB TO BE A MINIMUM OF 2.0m.
- FOR DETAILS OF BENCHING & BRANCH PIPES SEE DRG. NO. SD 8-4-201
- ALL CONCRETE COVER FOR REINFORCEMENT TO BE 75mm MIN.
- LIFTING HOOKS TO BE REMOVED AND GROUTED PRIOR TO TANKING OR LINING.
- ALL STRUCTURAL CONCRETE SHALL BE SRC 50 IN ACCORDANCE WITH CURRENT Q.C.S.
- PIPE OPENINGS WILL NOT BE PERMITTED THROUGH JOINT. DISTANCE FROM TOP OR BOTTOM OF ANY CAST OPENING SHALL BE A MINIMUM OF 150 PLUS JOINT DEPTH.
- ALL INCOMING PIPES SHALL BE LAID SOFFIT TO SOFFIT WITH THE OUTGOING PIPE UNLESS A RAMP/BACKDROP IS CONSTRUCTED.
- FOR BACKDROP CONNECTIONS SEE DRG No. SD 8-4-209.
- MAXIMUM RISER HEIGHT TO BE 3000. ACTUAL RISER HEIGHT TO SUIT INDIVIDUAL MANHOLE REQUIREMENTS. CONSIDERATION TO INCLUDE PIPE OPENINGS AND LOCATIONS, BASE HEIGHT AND OVERALL MANHOLE HEIGHT.
- PRECAST CONCRETE MANHOLES TO BE IN ACCORDANCE WITH BS EN 1917:2002
- ALL JOINTS FOR PRECAST MANHOLE TO BE IN ACCORDANCE WITH ASTM C443.
- ALL MANHOLES SHALL BE DESIGNED CONSTRUCTED TO SUIT INDIVIDUAL PROJECT REQUIREMENTS. SHOP DRAWINGS SUBMITTAL SHALL DETAIL ALL PIPE PENETRATIONS, PIPE LAYOUTS, JOINT, AND REINFORCEMENT DETAILS
- STRUCTURAL DESIGN TO BE IN ACCORDANCE WITH BS 5400 AND DESIGN CRITERIA SET FORTH IN THE LR&DP DESIGN MANUAL, APPENDIX H.
- MINIMUM REINFORCING STEEL TO BE .0035x1000x'T' IN EACH DIRECTION.
- THE STRUCTURE SHALL BE BACKFILLED TO AT LEAST 1.0m BELOW TOP OF ACCESS SHAFT BEFORE DEWATERING IS TURNED OFF.
- ALL PRECAST MANHOLES TO BE SUPPLIED BY ASHGHAL APPROVED MANUFACTURERS.
- NO PIPE OPENING TO BE FORMED ON SITE. ONLY FACTORY FORMED OPENINGS WILL BE ALLOWED.
- FOR BASE DETAIL SEE DRG No. SD 8-4-208.
- REFER TO DRG No. SD 8-4-204 FOR MANHOLE DIMENSION SCHEDULE AND COVER SIZE.
- MANHOLES IN CARRIAGEWAY TO BE BACKFILLED TO THE UNDERSIDE OF THE SUB BASE, FROM THE EXCAVATED SURFACE WITH SMPA FLOWABLE FILL. AT TRENCH OPENINGS, ROUGH SHUTTERING SHALL BE PROVIDED TO GIVE A MINIMUM THICKNESS OF 300 AROUND THE MANHOLE. WHERE FLOWABLE FILL IS USED FOR BACKFILL, TANKING MEMBRANE TO WALLS IS REQUIRED ONLY TO 300 ABOVE THE HIGHEST PIPE CROWN LEVEL. POLYTHENE SHEETING SHALL BE USED TO PREVENT THE FLOWABLE FILL ENTERING THE GRANULAR BED AND SURROUND. TANKING MEMBRANE IS NOT REQUIRED FOR PRC MANHOLES.

LEGEND:

FRL	FINISHED ROAD LEVEL
FGL	FINISHED GROUND LEVEL

4	APR 19	ISSUED FOR USE	
3	01 MAR 19	UPDATED ISSUE	
2	21 JAN 16	ISSUED FOR USE	
1	23 NOV 15	ISSUED FOR USE	
0	15 SEP 13	ISSUED FOR USE	

Rev.	Date	Revision Details	Appd.
هيئة الأشغال العامة Public Works Authority P.O.Box 22188 Tel.: (0974) 44950000 Fax.: (0974) 44950999 www.ashghal.gov.qa			
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PA PROJECTS AFFAIRS

QCS Section:
Section 8 - Drainage Works
Part 4 - Pipeline Installation

Drawing Title:
**FOUL SEWER
TYPICAL PRECAST MANHOLE**

Approved:	Sheet No: 1 OF 1
Date: APRIL 2019	Scale: N.T.S.
Drawing Number: SD 8-4-207	Revision: 4