

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
  - REFER TO THE GENERAL NOTES IN DRAWING NO. PUB/WSN/GN/001.
  - PROVIDE 2 NOS 100MM DIA UPVC PIPES WITH PROTRUDING END CAPS IN CHAMBER WALL BESIDE ACCESS LADDER FOR ENTRY OF POWER AND SIGNAL CABLES. LOCATION OF WALL OPENINGS AND UPVC PIPES ARE INDICATIVE AND TO BE CONFIRMED ON SITE.
  - 't' SHALL NOT BE LESS THAN THE PIPE WALL THICKNESS.
  - THICKNESS OF M.S PLATE SHALL BE EQUIVALENT TO THICKNESS OF INTERNAL CEMENT MORTAR LINING.
  - SAFETY CAGES SHALL BE INSTALLED FOR ALL STAINLESS STEEL (GRADE 304) LADDERS EXCEEDING 3M HEIGHT.
  - ALL MANHOLE COVERS AND FRAME SHALL BE OF HEAVY DUTY DUCTILE IRON TO GRADE A1 UNDER S530.
    - USE STANDARD HEAVY DUTY DUCTILE IRON (GRADE A1) DOUBLE TRIANGULAR MANHOLE COVER AND FRAME (REFER TO PUB/WSN/STD/204) FOR 600MM DIA. OPENING.
    - USE STANDARD HEAVY DUTY DUCTILE IRON (GRADE A1) MANHOLE COVER AND FRAME FOR VALVE SPINDLE (REFER TO PUB/WSN/STD/219) FOR 260MM DIA. OPENING.
  - THE CONSULTANT'S P.E. SHALL UNDERTAKE THE DETAILED DESIGN OF THE CHAMBER AND SUBMIT (TOGETHER WITH THE ACCREDITED CHECKER APPOINTED BY THE BOARD) TO SUPERINTENDING OFFICER (S.O) AND BCA FOR APPROVAL.
  - THE CONSULTANT'S P.E. SHALL UNDERTAKE GEOTECHNICAL ANALYSIS TO ASSESS THE ALLOWABLE BEARING CAPACITY OF THE SOIL AND EXPECTED SETTLEMENT OF THE CHAMBER AND SUBMIT A REPORT TO THE BOARD. IN ADDITION, THE CONTRACTOR SHALL UNDERTAKE PLATE LOAD TESTS TO VERIFY THE IN-SITU SOIL BEARING CAPACITY. IN ACCORDANCE WITH BS EN ISO 22476-13. WHERE THE BEARING CAPACITY IS DEEMED INADEQUATE AND/OR SETTLEMENT IS EXCESSIVE, THE CHAMBER SHALL BE SUPPORTED ON PILES. THE CONSULTANT'S P.E. SHALL DESIGN ALL PILING WORKS AND SUBMIT (IN CONJUNCTION WITH THE ACCREDITED CHECKER APPOINTED BY THE BOARD), TO THE BUILDING AND CONSTRUCTION AUTHORITY (BCA) FOR APPROVAL.

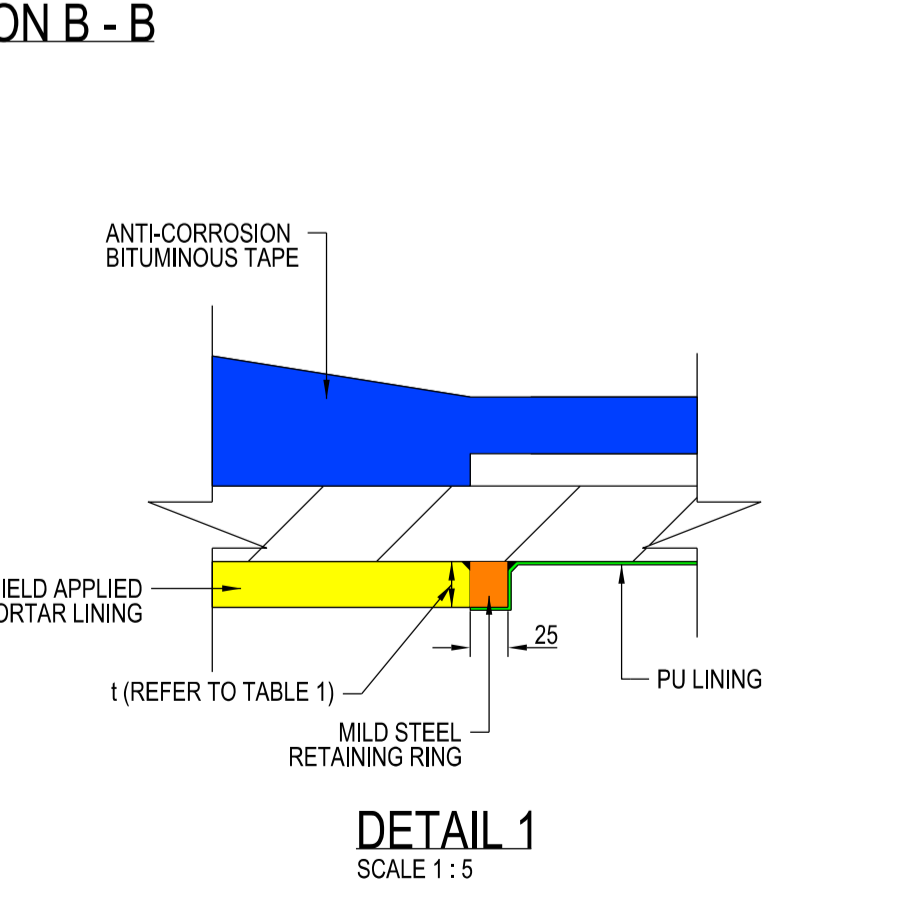
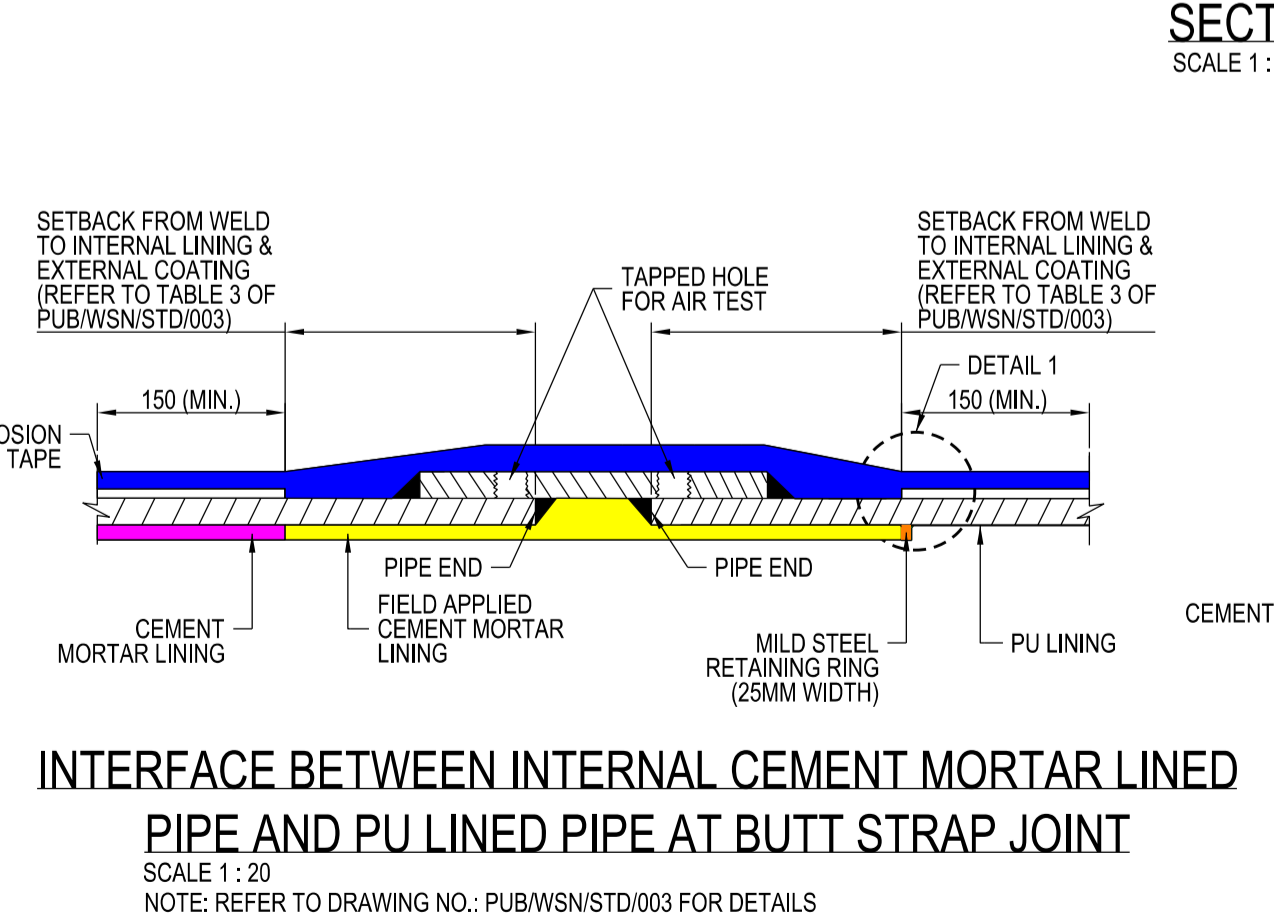
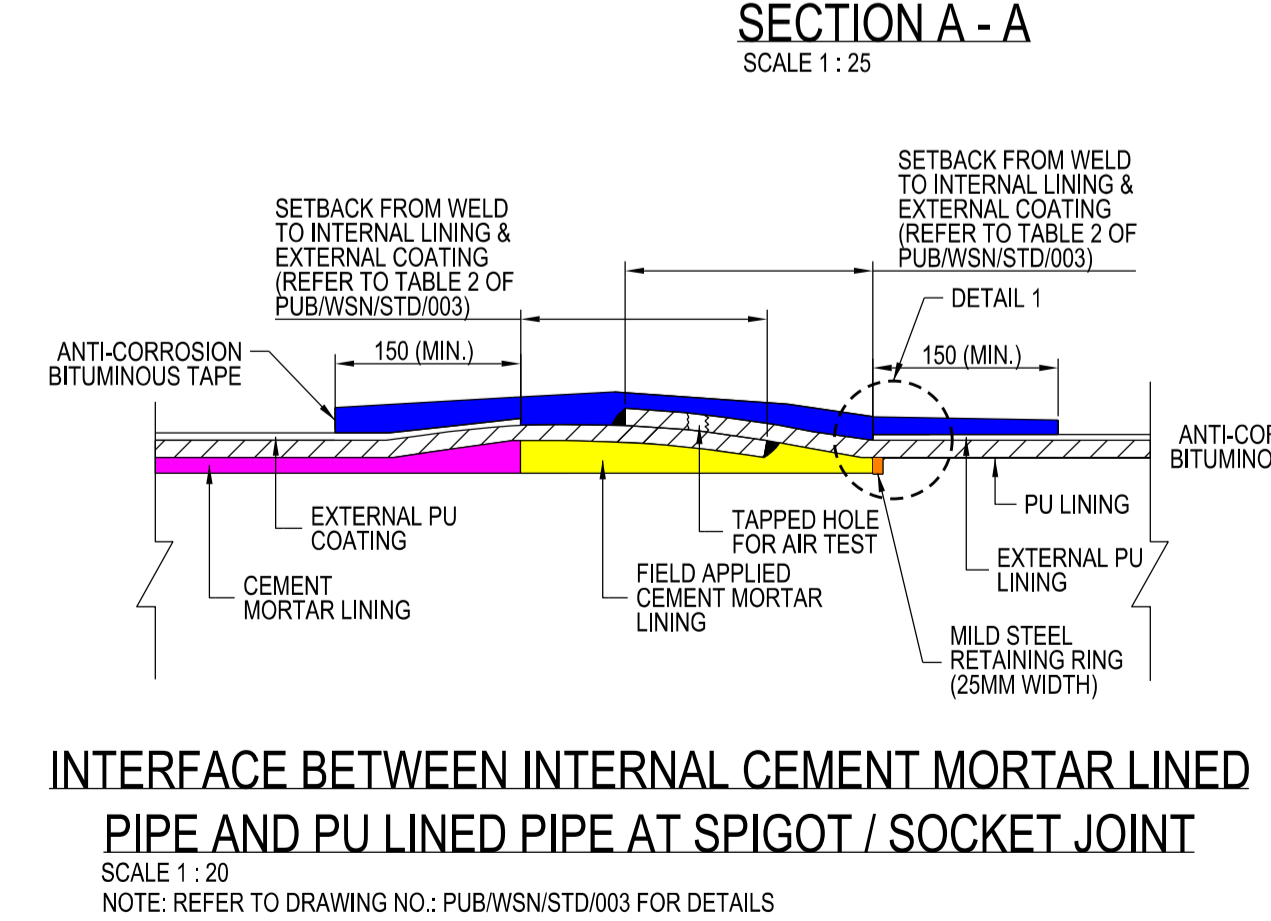
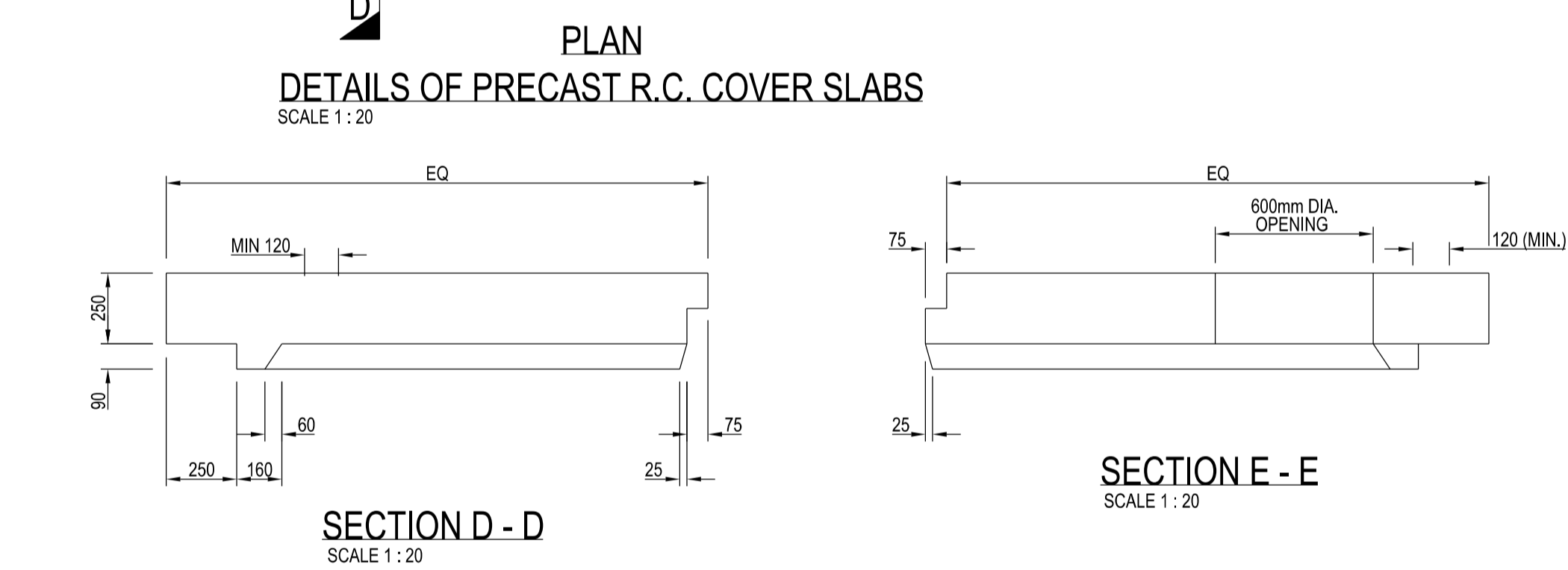
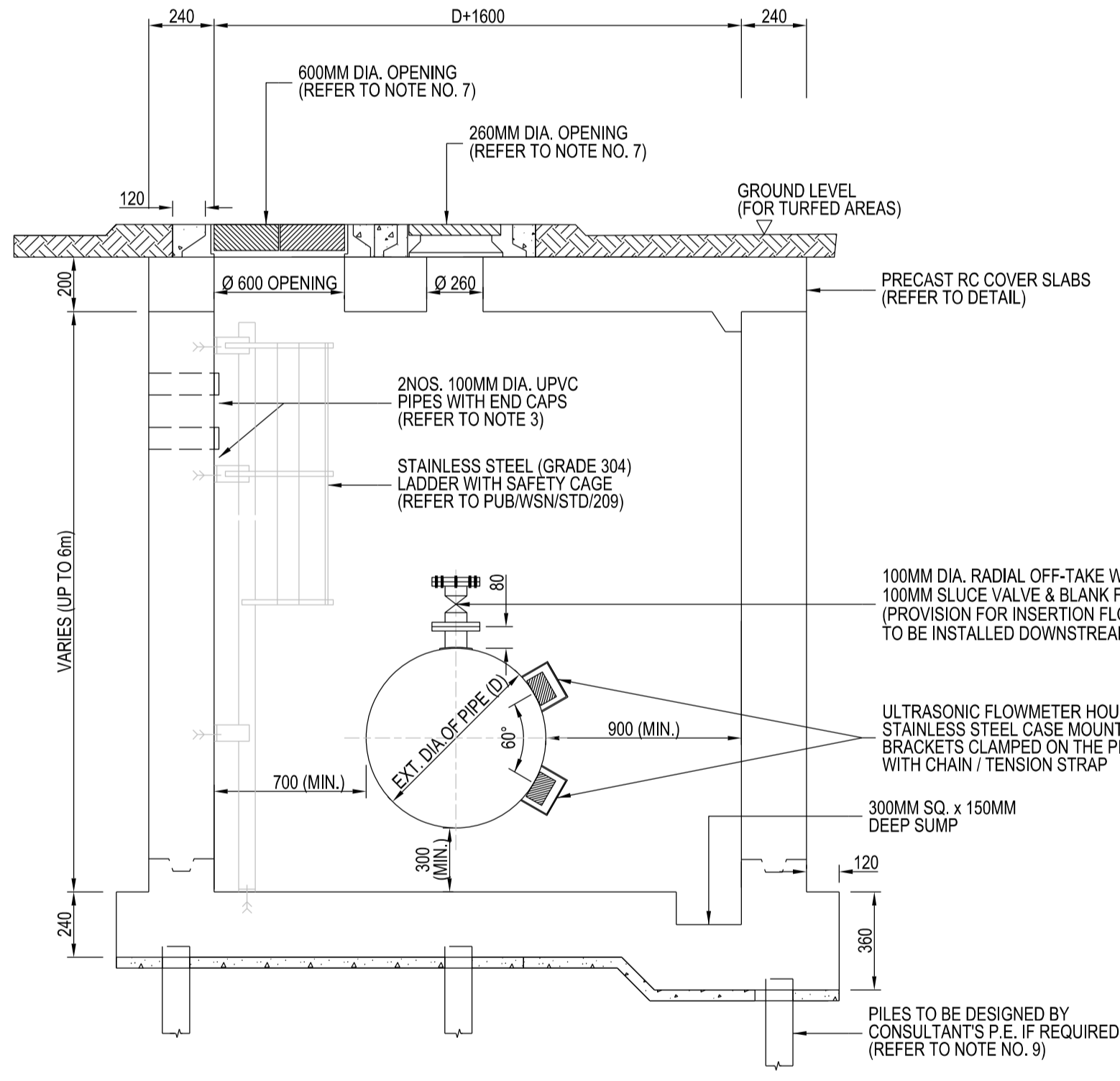
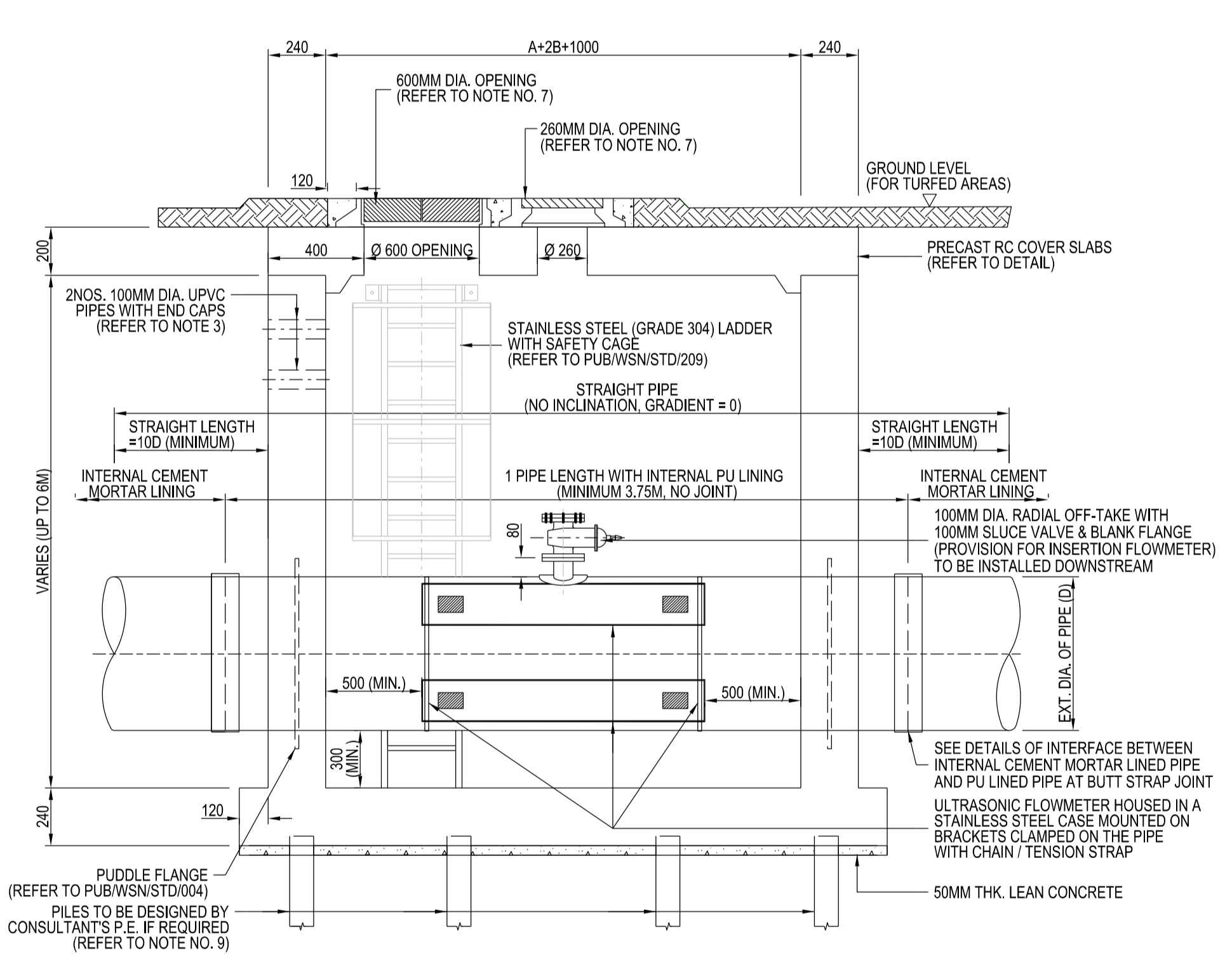


TABLE 1

NOMINAL DIAMETER (MM)	CONCRETE LINING (MM)	THICKNESS OF RETAINING RING (t) (MM)
700	13.0	13.0
800	19.0	19.0
900	19.0	19.0
1200	19.0	19.0
1400	25.0	25.0
1600	25.0	25.0
1800	25.0	25.0
1900	25.0	25.0
2200	25.0	25.0

NOMINAL PIPE DIAMETER 'D' (MM)	PIPE WALL THICKNESS (MM)	DISTANCE BETWEEN SENSORS 'A' (MM)	DISTANCE FROM SENSORS TO OUTER EDGE OF STAINLESS STEEL CASING 'B' (MM)
500	6.3	262	
700	6.3	390	
700	9.5	394	
800	8	517	
800	9.5	519	
800	12.7	522	
900	9.5	605	
900	12.7	609	
1000	12.7	685	
1200	12.7	858	
1200	15.9	861	
1400	12.7	998	
1400	15.9	1002	
1600	12.7	1100	
1600	15.9	1103	
1800	12.7	1258	
1800	15.9	1261	
1900	12.7	1390	
1900	15.9	1393	
2000	15.9	1515	
2000	19	1519	
2200	15.9	1637	
2200	19	1641	

AS PER MANUFACTURER'S DETAIL

ISSUED: NOV 2020	SCALE	DRAWING NO.
LAST REVIEWED: AUG 2021	AS SHOWN	PUB/WSN/STD/104

TYPICAL ULTRASONIC FLOW METER (USFM) CHAMBER (DEPTH UP TO 6m)