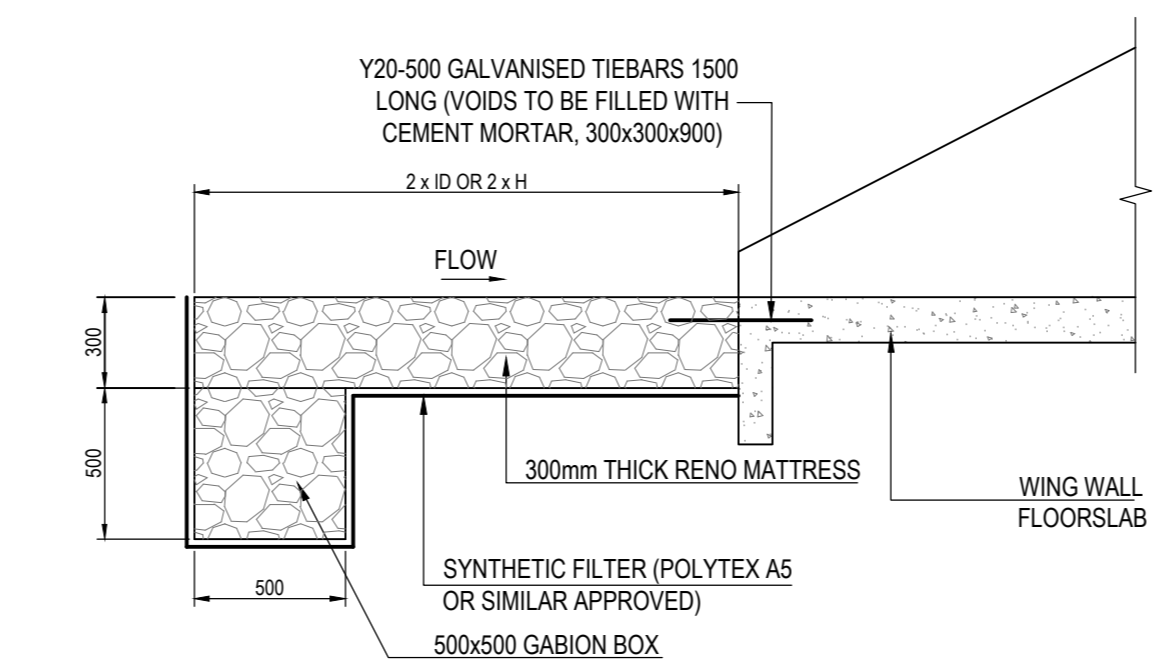
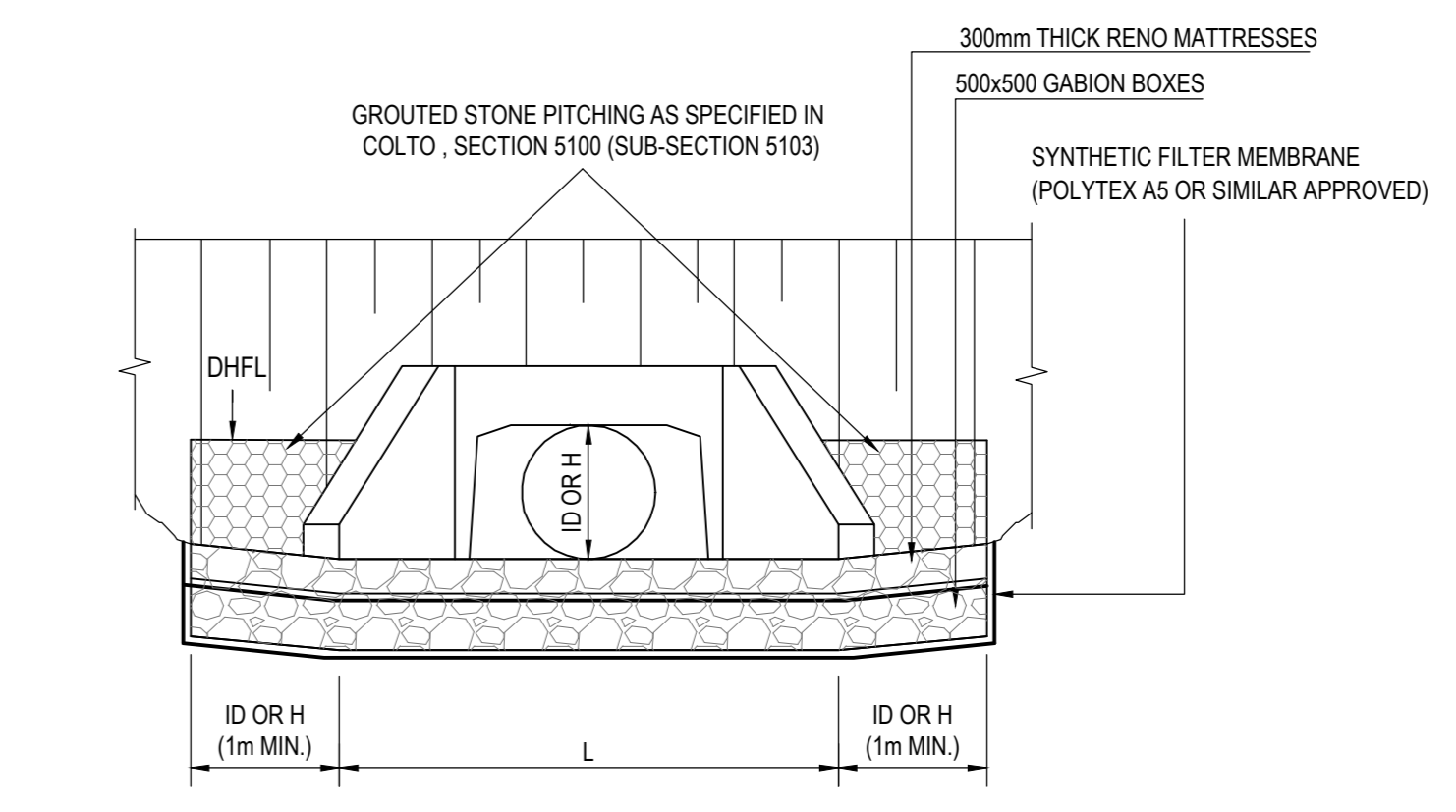


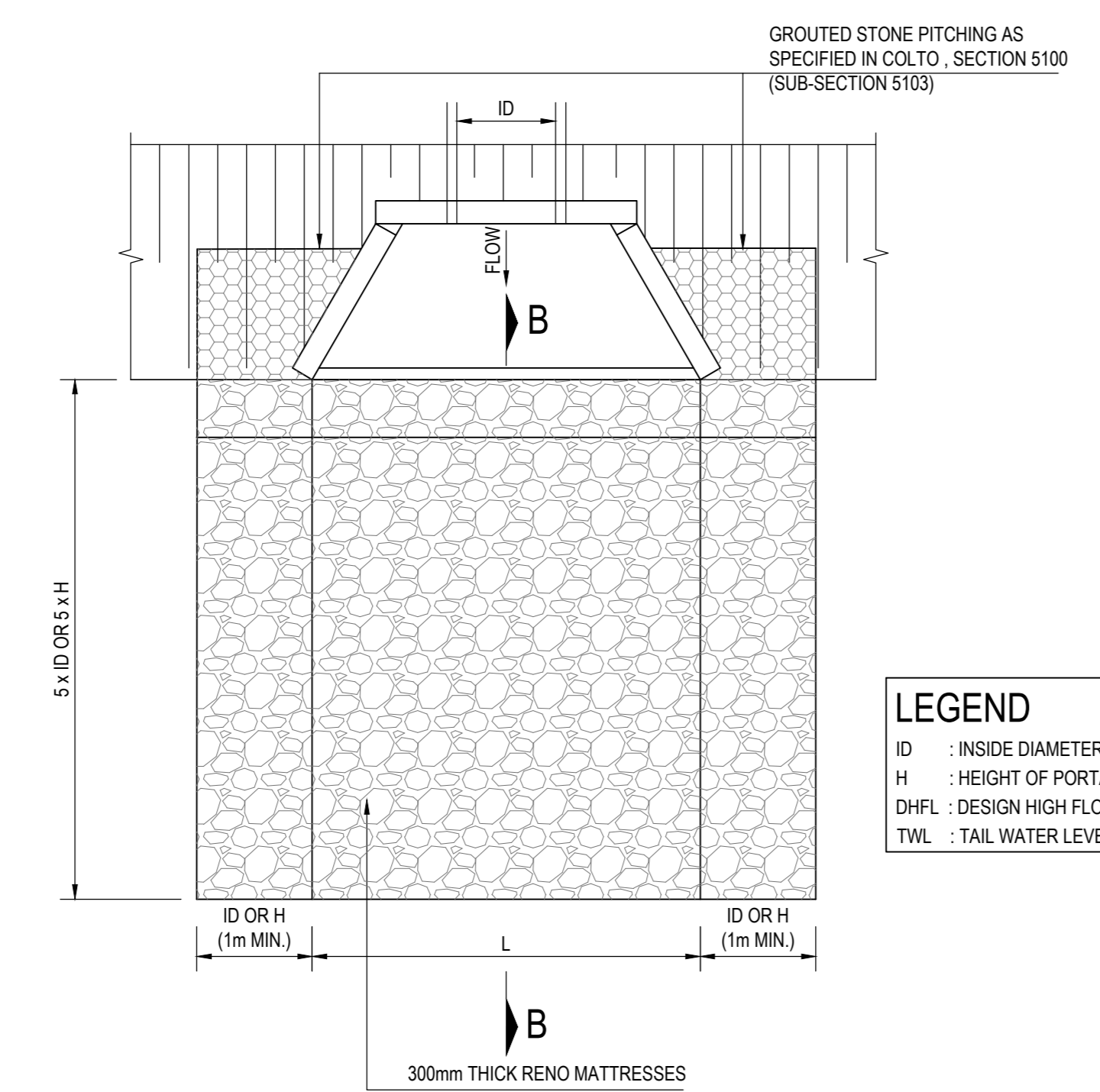
PLAN OF CULVERT (INLET)
SCALE 1:50



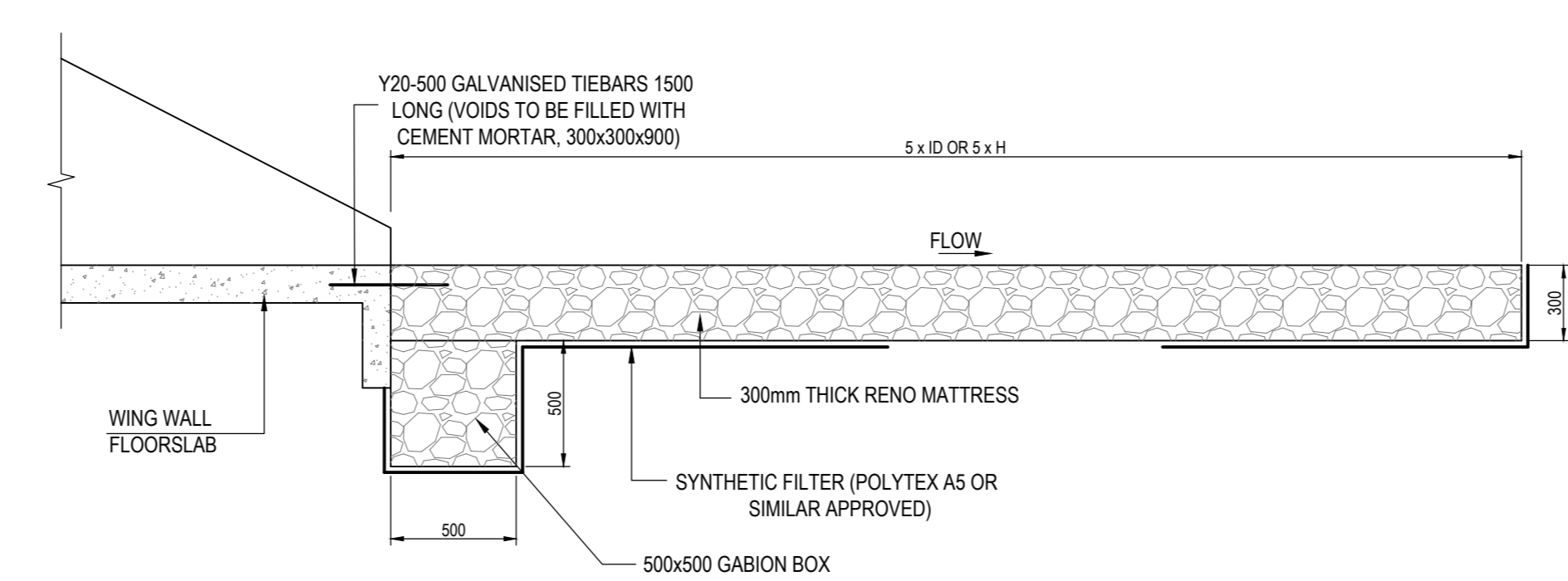
SECTION A-A
(INLET)
SCALE 1:25



ELEVATION OF CULVERT
(INLET)
SCALE 1:50



PLAN OF CULVERT (OUTLET)
SCALE 1:50

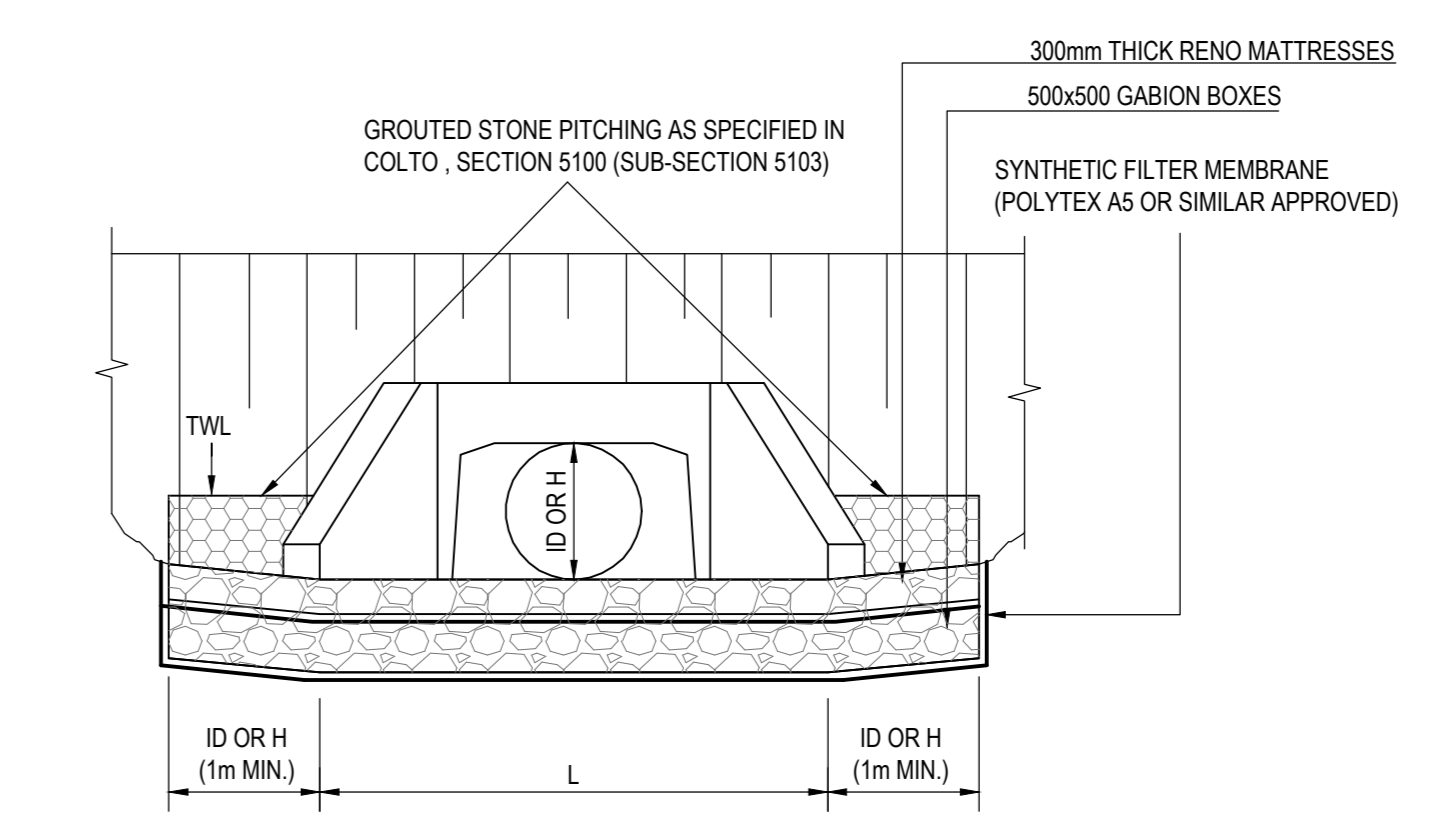


SECTION B-B
(OUTLET)
SCALE 1:25

EROSION PROTECTION AT STORMWATER OUTLET STRUCTURE

GUIDELINE FLOW VELOCITY (m/s)	PROTECTION MEASURE*
V < 1.5	FIELD GRASS
1.5 < V < 3.5	GRASS SODS
3.5 < V < 6.5	GABION MATTRESS (300mm)
6.5 < V < 8	GABIONS (500mm MIN)

LEGEND
 ID : INSIDE DIAMETER OF PIPE CULVERT.
 H : HEIGHT OF PORTAL CULVERT.
 DHFL : DESIGN HIGH FLOOD LEVEL.
 TWL : TAIL WATER LEVEL.



ELEVATION OF CULVERT
(OUTLET)
SCALE 1:50

NOTE
 1. GABION BOXES AND RENO MATTRESSES (MACCAFERRI SA OR SIMILAR APPROVED) DIMENSIONS, SPECIFICATIONS AND ASSEMBLY DETAILS AS PER MANUFACTURERS REQUIREMENTS.
 2. FOR GRASS, STONE PITCHING, CONCRETE AND STILLING BASIN EROSION PROTECTIVE MEASURES REFER TO CHAPTER 7 OF THE ROAD DRAINAGE MANUAL, 2ND EDITION, 2006.

No.	DATE	REVISION

CONSTRUCTION RECORD
 WORKS CONTRACT ENGINEER
 Name :
 Prof. Reg. No. :
 Date :
 PROJECT MANAGER
 Name :
 Date :

CONSULTANTS:
HEAD OFFICE
 Building 12
 Highgrove Office Park
 50 Teget Avenue
 Highveld
 Centurion
 0157
 Tel: (010) 035 1460



DESIGNED BY
 NAME : J. MABUZA
 Prof. Reg. No. :
 CHECKED BY
 NAME : B. MATLALA
 Prof. Reg. No. : 2019300403
 DRAWN BY
 NAME : E. COETZEE

CONSULTANT APPROVAL
 Name :
 Prof. Reg. No. :
 Date :



PROJECT DESCRIPTION:
 RUNWAY AND TAXIWAY REHABILITATION AT CHIEF DAVID STUURMAN INTERNATIONAL AIRPORT (CDSIA)
DAVID STUURMAN AIRPORT REHABILITATION:
 TYPICAL STORMWATER DETAILS
 SHEET 8
 SCALE : AS SHOWN

PROJECT NUMBER	4429_CDSIA	
DRAWING LOCATION DATA	START	END
ROUTE SECTION		
DRAWING km DISTANCE		
DRAWING TYPE	TYPICAL DETAILS	
CONSULTANT DRAWING No.	ROMH188-07-R9-008	REV 0