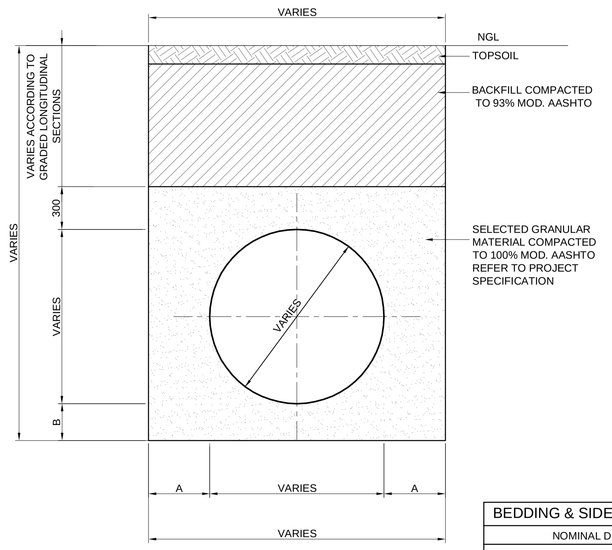


TYPICAL PIPE TRENCH

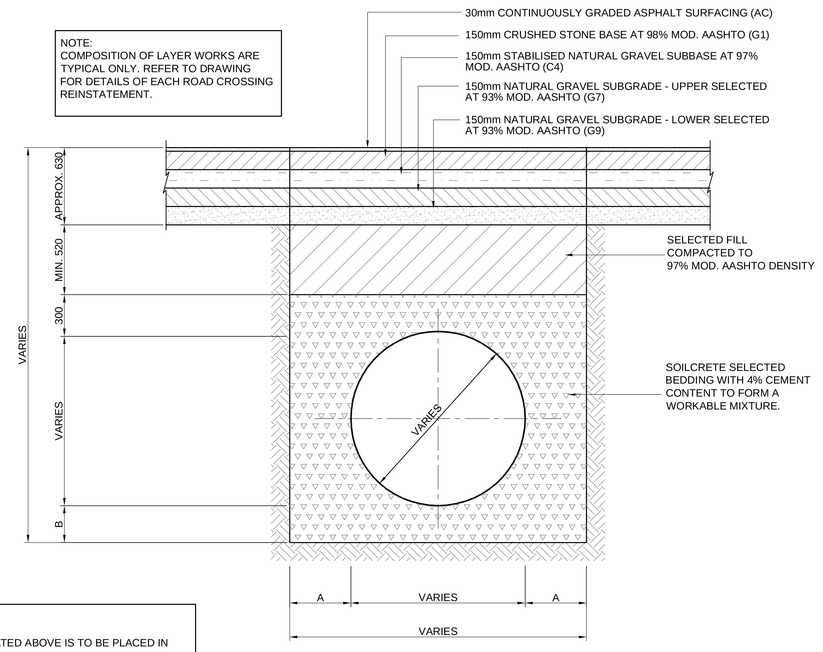
NTS

BEDDING & SIDE ALLOWANCE DIMENSIONS		
NOMINAL DIAMETER	A	B
DN1200	500	300
DN1100	500	300
DN1000	400	300
DN900	400	200
DN800	400	200
DN700	300	200
DN600	300	200
DN500	300	200

BEDDING NOTES:

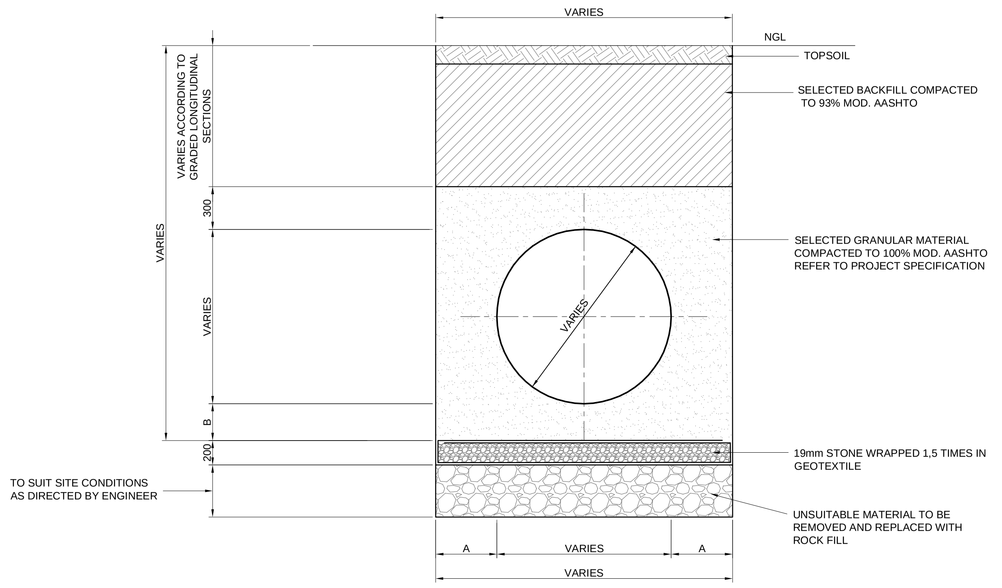
1. DIMENSION "B" TABULATED ABOVE IS TO BE PLACED IN TWO LAYERS.
2. THE FIRST LAYER (B LESS 100mm) IS TO BE PLACED AND COMPACTED AS PER SPECIFICATION.
3. THE PIPE IS TO BE LAID ON THE SECOND UNCOMPACTED LAYER TO PROVIDE A FINAL BEDDING THICKNESS "B" AS STATED IN THE TABLE ABOVE.

NOTE:
COMPOSITION OF LAYER WORKS ARE TYPICAL ONLY. REFER TO DRAWING FOR DETAILS OF EACH ROAD CROSSING REINSTATEMENT.



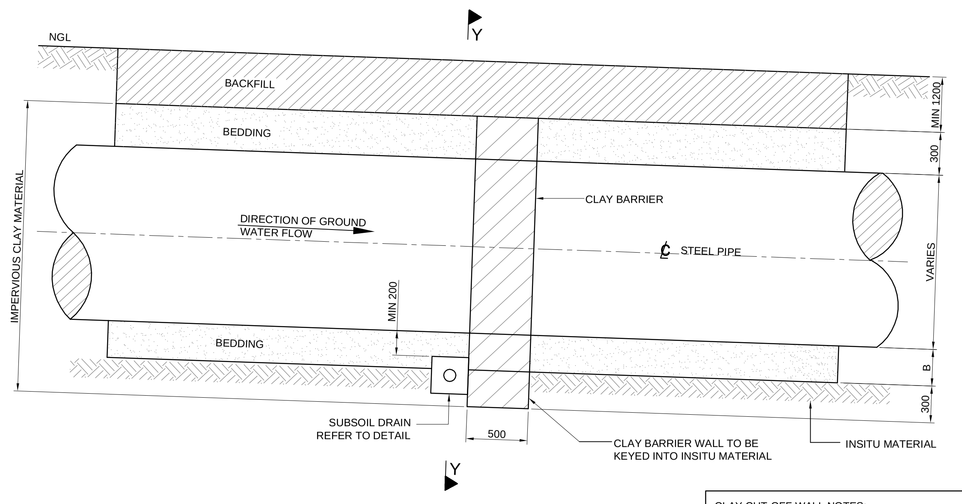
TYPICAL ROAD: TRENCH CROSSING AND LONGITUDINAL TRENCH DETAIL

NTS



TYPICAL STONE BEDDING DETAIL

NTS

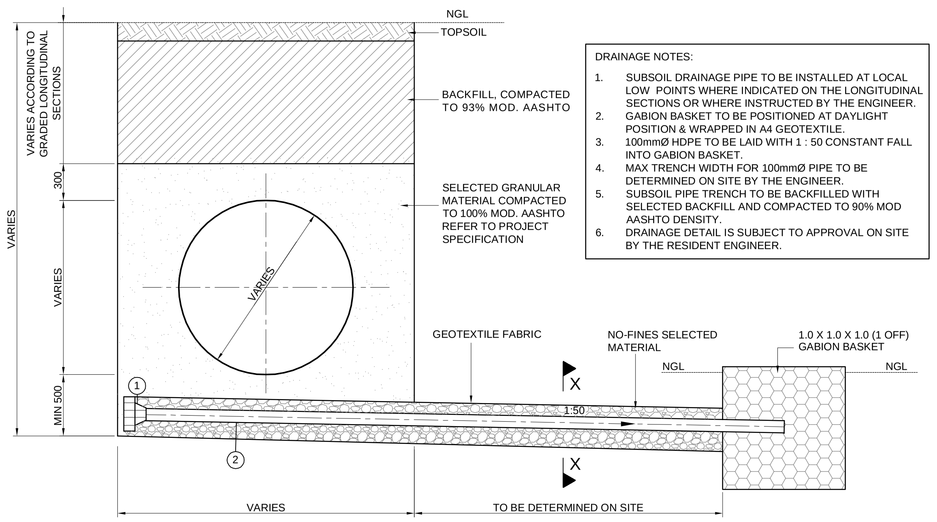


ELEVATION ON CLAY CUT-OFF WALL AND SUB SOIL DRAIN DETAIL

NTS

CLAY CUT-OFF WALL NOTES:

1. COMPACTION OF IN-SITU MATERIAL AROUND SUBSOIL DRAIN UNDER MAIN PIPE TO BE 98% MOD ASSHTO.
2. CLAY BARRIER WALL TO BE INSTALLED ONLY WHERE ORDERED BY THE ENGINEER.
3. CUT-OFF WALL OF IMPERVIOUS CLAY TO BE COMPACTED IN 150mm THICK LAYERS.



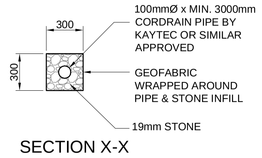
DRAINAGE NOTES:

1. SUBSOIL DRAINAGE PIPE TO BE INSTALLED AT LOCAL LOW POINTS WHERE INDICATED ON THE LONGITUDINAL SECTIONS OR WHERE INSTRUCTED BY THE ENGINEER.
2. GABION BASKET TO BE POSITIONED AT DAYLIGHT POSITION & WRAPPED IN A4 GEOTEXTILE.
3. 100mmØ HDPE TO BE LAID WITH 1 : 50 CONSTANT FALL INTO GABION BASKET.
4. MAX TRENCH WIDTH FOR 100mmØ PIPE TO BE DETERMINED ON SITE BY THE ENGINEER.
5. SUBSOIL PIPE TRENCH TO BE BACKFILLED WITH SELECTED BACKFILL AND COMPACTED TO 90% MOD AASHTO DENSITY.
6. DRAINAGE DETAIL IS SUBJECT TO APPROVAL ON SITE BY THE RESIDENT ENGINEER.

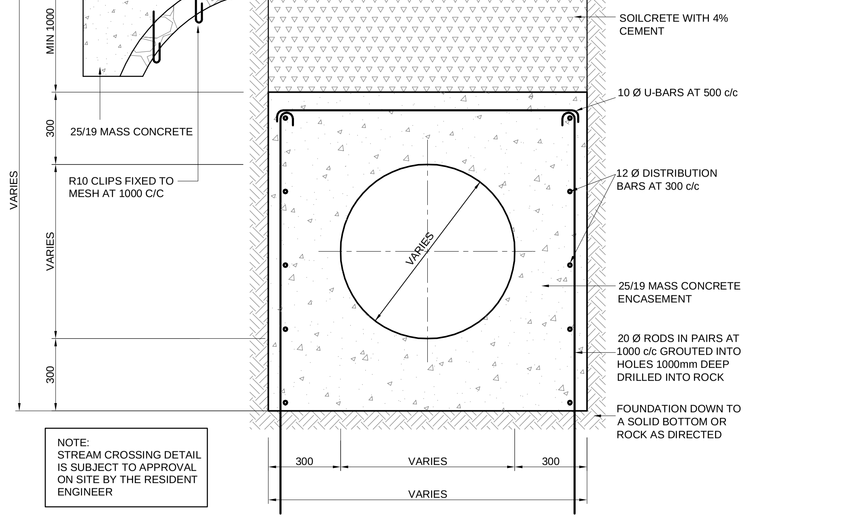
PIPEWORK SCHEDULE		
ITEM	DESCRIPTION	QTY
1	110mmØ END CAP	1
2	100mmØ x MIN. 3000mm CORDRAIN PIPE BY KAYTEC, WRAPPED 1,5 TIMES IN GEOTEXTILE AND NO-FINES SELECTED MATERIAL	1

SECTION Y-Y SUBSOIL DRAIN DETAIL

NTS

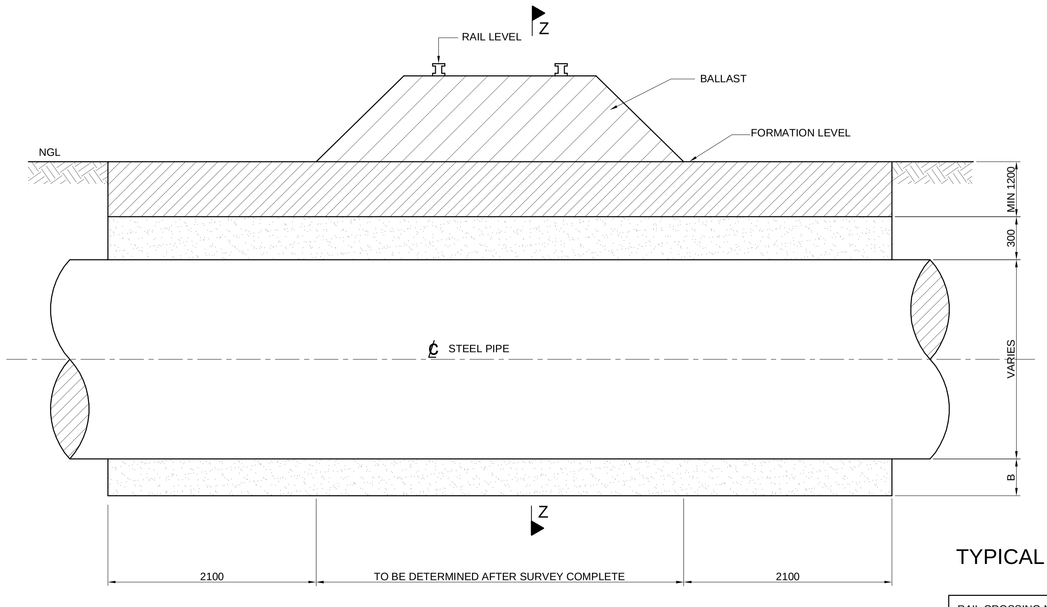


SECTION X-X



NOTE:
STREAM CROSSING DETAIL IS SUBJECT TO APPROVAL ON SITE BY THE RESIDENT ENGINEER

TYPICAL STREAM/RIVER CROSSING DETAIL NTS



SECTIONAL ELEVATION

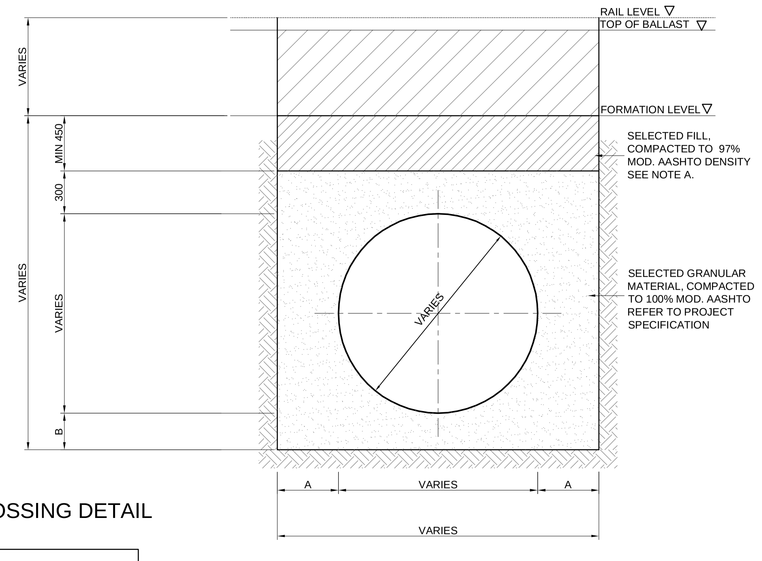
NTS

RAIL CROSSING NOTES:

A. SHOULD THE CONDITIONS ON SITE NOT BE SUITABLE TO ACHIEVE 98% Mod AASHTO DENSITY, 5% CEMENT STABILISED MATERIAL MAY BE USED AS AN ALTERNATIVE.

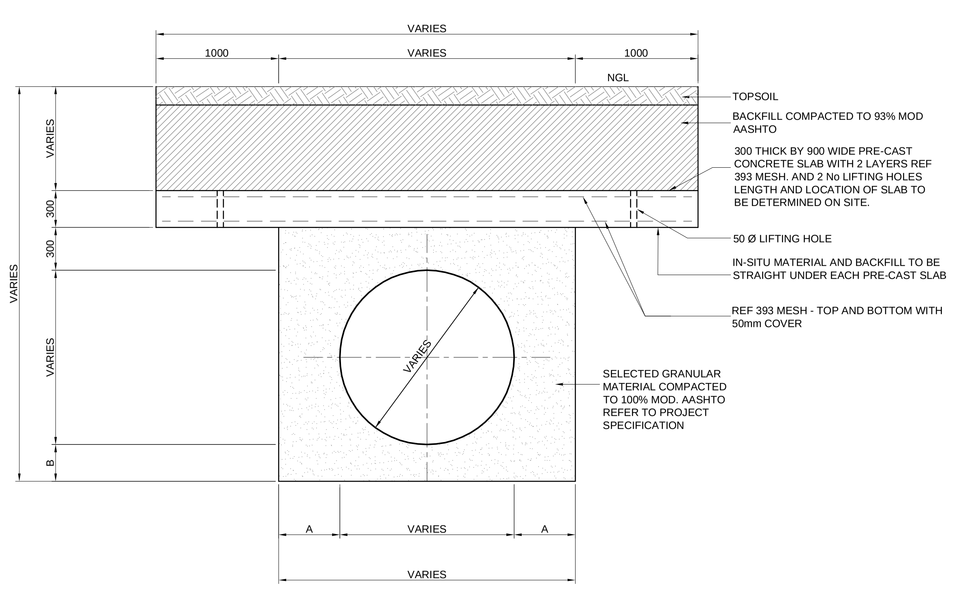
B. PROTECTION TO EXTEND 2.1m LENGTH WISE PAST BOTTOM EDGE OF BALLAST POINT.

TYPICAL RAIL CROSSING DETAIL



SECTION Z-Z

NTS



TYPICAL PIPE PROTECTION

NTS

FOR TENDER

Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

ETHEKWINI WATER SERVICES
WATER DESIGN BRANCH
eThekwini Municipality

REDUCED PLAN USE SCALE BELOW
0 10 20 30 40 50 60 70
70mm ON ORIGINAL PLAN

LEGEND
SEWERS AND M.H'S — SEMH
STORM WATER DRAIN HEADWALLS, AND CATCHPIT M.H'S — SWMH SWCP SWAP
WATER MAINS AND VALVES (EXISTING) — MKR V FH WM
PROPOSED PIPE CL
ETHEKWINI ELECTRICITY (OH) — ELP EP STL
ETHEKWINI ELECTRICITY (UG)
ESKOM (OH) — LP EP STL
ESKOM (UG)
TELKOM (OH) — STW TP TMH TP
TELKOM (UG)
NEOTEL
VODACOM
PETRONET
FENCE/BOUNDARY WALL
GATE
SIGNPOST — SP
SIGNBOARD — SB
ROADMARKER POST — RMKR
AIR VALVE
SCOUR VALVE
ISOLATING VALVE

CONSULTANT:
NORTHERN AQUEDUCT CONSULTANTS JOINT VENTURE
Knight Piésold CONSULTING
NAIDU CONSULTING CIVIL & STRUCTURAL ENGINEERING CONSULTANT

APPROVED: A.DOORGAPERSHAD, PR. ENG. 980766 DATE

JOINT VENTURE DRAWING No.
00213/H/ED1
Knight Piesold Drawing Number
303-00213/01/A/H/ED1

Ref Drg.	Description

Revision	Date	Description
0	XXXXXXX	ISSUED FOR TENDER

NOTE:No construction work to commence until land and servitude acquisitions have been completed
Acquisitions completed:
Date Engineer NORTH POINT

UNDERGROUND SERVICES CHECKED –

SERVICE	DATE	SIGNATURE
S.W DRAINS		
SEWERS		
WATERMAINS		
TELKOM CABLES		
ELECTRIC CABLES		
S.A.R CABLES		
E.S.C CABLES		
OIL PIPE LINE		

NOTE: Only underground services affected by new construction are shown. Care must be taken during excavations for road foundations;trenches etc.to avoid damage to underground services such as sewers,drains,cables,watermains and connections.Wherever possible these must be located before work begins

Contract No. WS 6177
Project No. 30300213
Planning Unit: VARIOUS
Ward No.: VARIOUS
Project Title: NORTHERN AQUEDUCT AUGMENTATION – PHASE 1
Section: SECTOR H WATERLOO OFF-TAKE TO WATERLOO RESERVOIR
Drawing Title: TYPICAL TRENCH DETAILS

Scales : AS SHOWN
Designed : R.N | Date : NOV 11
Checked : A.D | Drawn : S. MB

Area Engineer (W.O)
Manager (Design)
Deputy Head (T.S)
N.A.Macleod – Head (W & S)

Drawing No. 53464/18 | Sheet 1/1 | Rev. 0