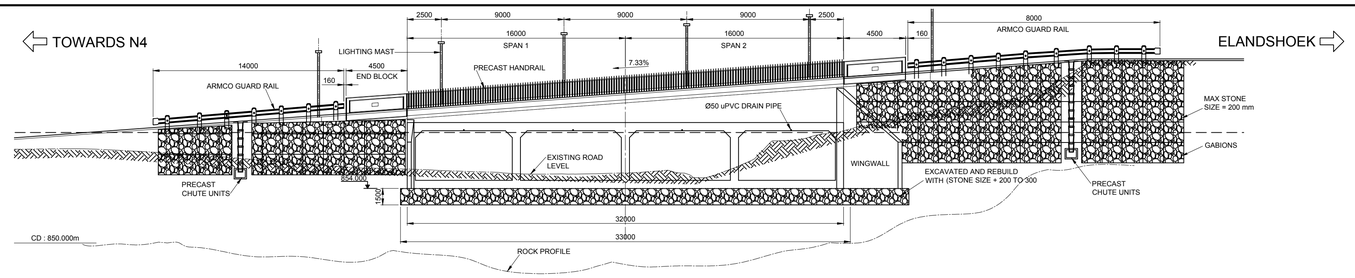
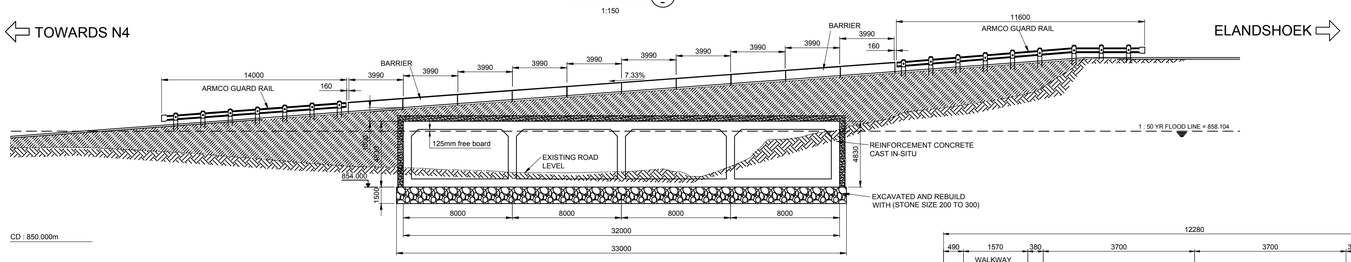
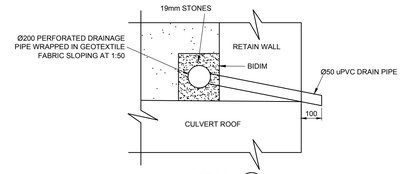


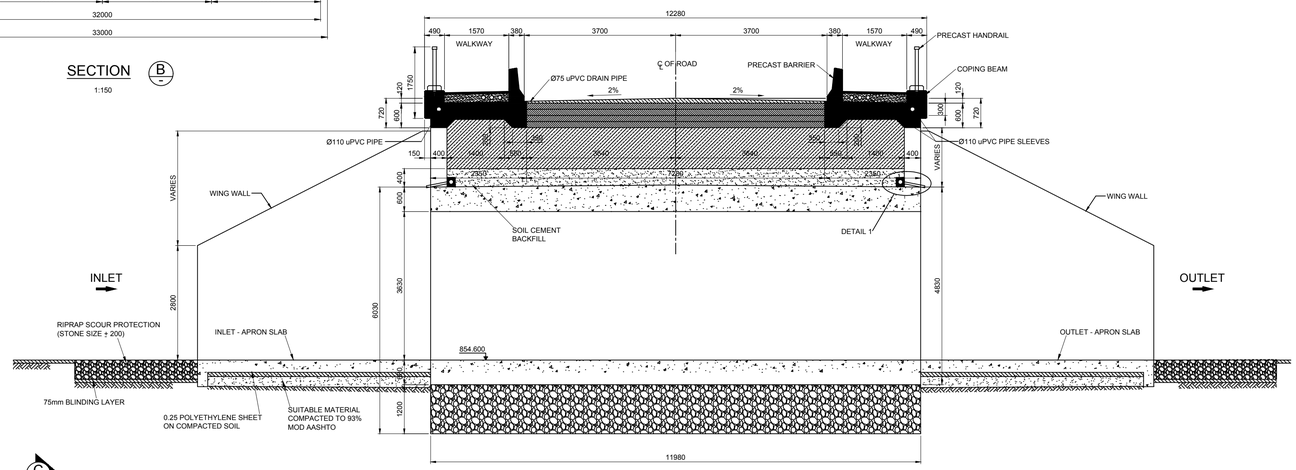
ELEVATION A
1:150



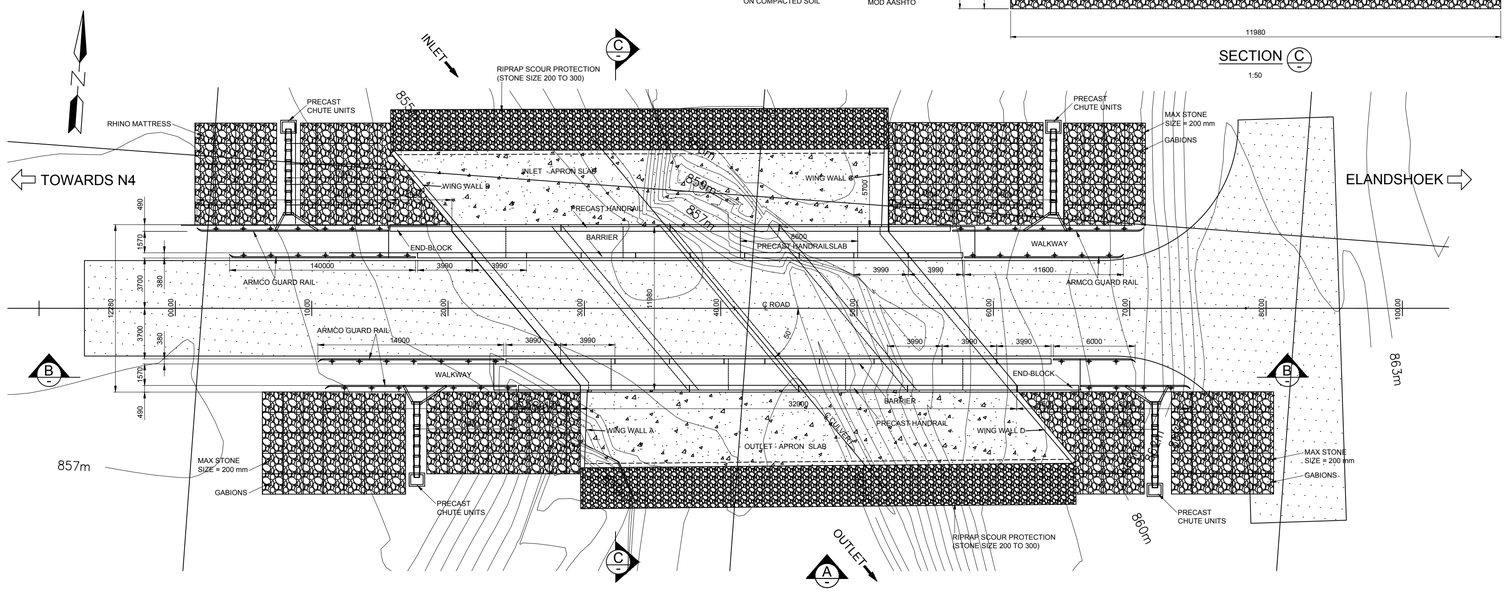
SECTION B
1:150



DETAIL 1
1:10



SECTION C
1:50



PLAN
1:150

GENERAL DESIGN NOTES:

METHOD:

EXCAVATE THE ALLUVIUM MATERIAL DOWN TO A DEPTH OF 1600MM BELOW NATURAL GROUND LEVEL AND STOCKPILED IN ONE AREA.
THE ABOVE OPERATION IS FOLLOWED BY COMPACTION OF THE IN-SITU MATERIAL TO 93% MOD AASHO.
THE ABOVE IS FOLLOWED BY A CONSTRUCTION OF 1500MM DRAINAGE LAYER CONSTRUCTED USING IMPORTED DUMP ROCKS (200-300MM IN SIZE).
CONSTRUCTED IN LAYERS NOT EXCEEDING 200MM AND COMPACTED UNTIL THE MOVEMENT BELOW THE ROLLER IS NEGLIGIBLE (COMPACTION EFFORT OF 90% MOD AASHTO). THE TOP OF DUMPROCK SHOULD BE WRAPPED WITH A FILTER FABRIC BLANKET BEFORE CASTING A BLINDING LAYER
A CONCRETE RAFT FOUNDATION, ADEQUATELY REINFORCED CAN THEN BE PLACED ONTO THE COMPACTED DUMPROCK MATTRESS UTILIZING AN ALLOWABLE BEARING CAPACITY OF 500KPA.

CONCRETE NOTES:

1. FOUNDING LEVEL
   CONTRACTOR TO CONFIRM FOUNDING LEVES WITH ENGINEER PRIOR CASTING OF BLINDING LAYER. THE ENGINEER MAY INSTRUCT THE CONTRACTOR TO EXCAVATE DEEPER THAN INDICATED ON THE DRAWING AND REPLACE UNSUITABLE MATERIALS WITH MASS CONCRETE OR SELECTED BACKFILL.
2. ALL VISIBLE CONCRETE FACE FINISHES SHALL BE SMOOTH OFF-SHUTTER AND ALL IMPERFECTIONS SHALL BE REPAIRED
   FOR CONCEALED MEMBERS, DEFECTS SHALL BE REPAIRED BUT NO SPECIAL TREATMENT IS REQUIRED
3. ALL EXPOSED CONCRETE EDGES TO HAVE A 25 X 25mm CHAMFER
4. ALL DIMENSIONS TO BE CONFIRMED ON SITE
5. CONCRETE TO COMPLY WITH COLTO
6. CURING METHOD STATEMENT TO BE APPROVED BY THE ENGINEER

SURFACE FINISHES:

1. FORMED SURFACES:

CLASS F1 - UNEXPOSED TO VIEW
CLASS F2 - EXPOSED TO VIEW: HEAD WALLS, WING WALLS AND APRON SLAB

2. UNFORMED SURFACES:

CLASS U2 - EXPOSED TO VIEW: HEAD WALLS AND WING WALLS

MATERIAL STRENGTHS:

1. CONCRETE:
   - 1.1 FOUNDATION.....CLASS 30/19
   - 1.2 HEAD WALLS.....CLASS 30/19
   - 1.3 ROOF.....CLASS 30/19
   - 1.4 WING WALLS.....CLASS 30/19
   - 1.5 WALKWAY SLAB.....CLASS 20/19
   - 1.6 PRECAST BARRIER.....CLASS 20/19
   - 1.7 COPING SLAB.....CLASS 20/19
   - 1.8 BLINDING LAYER.....CLASS 15/19
2. REINFORCEMENT:
   - 2.1 MILD STEEL (PREFIX - "R") -.....fy = 250 MPa
   - 2.2 HIGH TENSILE STEEL (PREFIX - "Y") -.....fy = 450 MPa

CONCRETE COVER:

1. CONCRETE COVER.....WALLS : 30mm
   .....ROOF : 30mm
   .....BASE SLABS : 40mm

DESIGN LOADINGS:

1. THE DESIGN LOADINGS ARE IN ACCORDANCE WITH TMH 7, Part 1 & 2, "CODE OF PRACTICE FOR THE DESIGN OF HIGHWAY BRIDGES AND CULVERTS IN SOUTH AFRICA, 1981" AS AMENDED IN 1988
   - 1.1 LIVE LOADS:.....TYPE NA, NB 36, NC
   - 1.2 DEAD LOADS: REINFORCED CONCRETE.....26,0 kN/m³
   - 1.3 BACKFILL TYPE: SPECIFIC WEIGHT.....20,0 kN/m³
2. DESIGN PARAMETERS:
   - 3.1 DENSITY OF FILL:.....20.0 kN/m³
   - 3.2 INTERNAL SOIL FRICTION ANGLE:.....30°
   - 3.3 LATERAL EARTH PRESSURE COEFFICIENT:
     - (EARTH AT REST).....ko = 0.5
     - YIELDING.....ka = 0.33
3. TEMPERATURE IN ACCORDANCE WITH TMH 7:
   - 3.1 THERMAL EXPANSION COEFFICIENT = 12 x 10^ - 6 / °C

LIST OF DRAWING :

SHEET 01 : SITE PLAN A
SHEET 02 : SITE PLAN B
SHEET 03 : GENERAL ARRANGEMENT
SHEET 04 : CULVERT - DETAILS
SHEET 05 : PARAPETS & END-COLUMNS & BARRIERS DETAILS
SHEET 06 : MISCELLANEOUS - DETAILS
SHEET 07 : LIGHTING LAYOUT

DATE	STATUS	REV	REVISION DESCRIPTION	REF. DRG No.	REFERENCE DRAWING TITLE	REF. DRG No.
19-06-2019	T	00	FOR TENDER			

NOTES: REF. DRG No.
1. THE MASTER OF THIS DRAWING IS HELD AT THE SML PROJECTS AT POLOKWANE OFFICE AND BEARS THE ORIGINAL SIGNATURE OF APPROVAL

FUNCTION	NAME	SIGNATURE
DESIGNED BY	C. SITHOLE	
DRAWN BY	C. DLAMINI	
DESIGN CHECKED BY	T. RATHEBE	
DRAWING CHECKED BY	C. SITHOLE	

CONSULTANT APPROVAL

NAME	SIGNATURE	DATE

SML PROJECTS (Pty) Ltd
14 Niel Street
Boteleur Building
1st Floor
Nelspruit
1200
TEL (013) 753 3191
FAX (013) 753 3157

DISCIPLINE: WATER

CLIENT

CITY OF MBOMBELA
P. O. Box 45
NELSPRUIT
1200
TEL (013) 759 9111
FAX (013) 759 2070

FOR CLIENT | DATE

PROJECT DESCRIPTION: CONSTRUCTION OF ELANDSHOEK N4 INTERSECTION - BRIDGE

DRAWING TITLE: GENERAL - ARRANGEMENT

DRAWING STATUS CODES : P=PLANNING C=CONSTRUCTION T=TENDER A=AS BUILT

SCALE	SHEET	SHEET SIZE
AS SHOWN	03	A0

SML DRAWING NUMBER

SML PROJ. No	DISCIPLINE	NUMBER	STATUS	REVISION
MP - 046	002	003	T	00

COPYRIGHT RESERVED