

**LIST OF DETAILS**

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**1. GENERAL NOTES**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE LAYOUT DRAWING, LONGITUDINAL SECTION DRAWINGS AND SPECIFICATIONS DOCUMENTED IN THE BILL OF QUANTITIES. ANY DISCREPANCIES MUST BE REFERRED TO THE ENGINEER IMMEDIATELY.
2. NO SCALING-OFF IS PERMITTED. ONLY WRITTEN DIMENSIONS MAY BE DEEMED CORRECT. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
3. ALL WORK TO COMPLY WITH THE LATEST EDITION OF THE SANS 1200 SPECIFICATIONS.
4. ALL CUT SLOPES TO BE SHAPED TO 1:1.5 AND FILL SLOPES TO 1:2 UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE.
5. FILL MATERIAL TO BE COMPACTED IN LAYERS OF MAX. 150mm TO 85% MOD. AASHTO. STEPS TO BE FORMED PRIOR TO FILLING. HEIGHT OF STEPS TO BE APPROXIMATELY 300mm LIFTS.
6. COMPACTION TESTING TO BE DONE AS FOLLOWS:  
(a) 1 TEST FOR EACH 250m<sup>2</sup> LENGTH OF FOOTPATH
7. BOLLARDS TO BE CONSTRUCTED ONLY WHEN INSTRUCTED BY THE ENGINEER.
8. WHERE THE COVER LEVELS OF THE EXISTING MANHOLES LOCATED IN THE ALIGNMENT OF NEW FOOTPATHS IS HIGHER THAN THE FINISHED DESIGN LEVEL OF THE FOOTPATH, MANHOLE RINGS ARE TO BE CUT SUCH THAT THE NEW MANHOLE COVER LEVEL IS CONSISTENT WITH THE LEVEL AND SLOPE OF THE FOOTPATH. EXISTING MANHOLE LIGHT DUTY COVERS AND FRAME ARE TO BE REPLACED WITH HEAVY DUTY COVERS AND FRAME. EXPOSED REINFORCING MUST BE PAINTED WITH SKA TOP AMATEC 110 EC OR SIMILAR APPROVED.
9. THAT THESE DRAWINGS AND ALL COPIES WILL BE RETURNED TO BVI IMMEDIATELY ON DEMAND.
10. THAT ALL INFORMATION DISCLOSED BY THESE DRAWINGS SHALL BE DEEMED TO BE CONFIDENTIAL.

**2. CONCRETE**

- 2.1 CONCRETE WORKS TO COMPLY WITH SANS1200 SECTION G AND SANS 5010 PART 2
- 2.2 THE FREQUENCY OF CONCRETE WORKS TESTING MUST BE DONE AS FOLLOWS:  
(a) AT LEAST ONE SET (3 NO. CUBES) OF SAMPLES FOR EVERY 50m<sup>3</sup> OF CONCRETE PLACED.  
(b) AT LEAST ONE SET OF SAMPLES SHALL BE TAKEN FROM EACH DAY CASTING.  
(c) TESTING MUST BE CARRIED OUT IN ACCORDANCE TO SANS METHOD 501 AND TESTED BY AN APPROVED LABORATORY. RESULTS TO BE SUBMITTED TO THE ENGINEER.  
(d) ON THE BASIS OF IMPORTANCE, WHERE DIRECTED BY THE ENGINEER, A SET OF SAMPLES MAY BE REQUESTED.  
(e) UNLESS OTHERWISE ADVISED, NO SAMPLE SHALL BE TAKEN OF ANY CONCRETE UNTIL AT LEAST 1m<sup>3</sup> OF SUCH CONCRETE HAS BEEN MIXED AND DISCHARGED FOR THE FOOTPATHS.
- 2.3 CURING AND PROTECTION SHALL BE ACCORDING TO SANS 10100-5.8.8
- 2.4 ALL CONCRETE TO BE PROPERLY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP, AT LEAST 7 DAYS AFTER CASTING.
- 2.5 CONCRETE POURING WILL ONLY BE DONE UPON THE APPROVAL OF THE SHIFTERING AND FIXING OF THE REINFORCEMENT FOR THE FOOTPATHS/DRAINS
- 2.6 MIN. CONCRETE CURE STRENGTH AT 28 DAYS:  
FOOTPATH 20 MPa  
DRAIN 20 MPa  
KERB BASE AND HAUNCH 20 MPa  
STEP CONCRETE BASE 15 MPa  
RETAINING WALL BASE 20 MPa

**3. FOOTPATH**

- 3.1 FOOTPATHS TO BE CAST IN 2m ALTERNATE PANELS WITH 10mm SOFTBOARD JOINT AT EVERY 10m CENTRES.
- 3.2 THE FOLLOWING TYPE OF FOOTPATHS ARE TO BE CONSTRUCTED DEPENDING ON THE ASSESSMENT OF THE NATURAL GROUND CONDITIONS:  
(a) TYPE A - TO BE CONSTRUCTED WHERE THE INSTTU MATERIAL CAN BE COMPACTED TO 95% MOD AASHTO.  
(b) TYPE B AND C - TO BE CONSTRUCTED WHERE THE MINIMUM COMPACTION OF 95% MOD AASHTO CANNOT BE ACHIEVED FOR THE INSTTU MATERIAL.

**4. STAIRCASE AND HANDRAILS**

- 4.1 STAIRCASE DESIGN CAN BE USED FOR A MAXIMUM HEIGHT OF 3m.
- 4.2 PRECAST BASS STEP OR SIMILAR APPROVED IS TO BE USED.
- 4.3 200mm<sup>2</sup> 3mm CONCRETE BASE TO BE CONSTRUCTED BELOW STEPS.
- 4.4 HAND RAILS ARE TO BE INSTALLED UNDER THE FOLLOWING CONDITIONS:  
(a) WHERE STAIRCASES EXCEED 4 NO. RISERS  
(b) FILL EMBANKMENTS ARE HIGHER THAN 1m  
(c) WHERE STAIRCASES EXCEED 10 STEPS AN ADDITIONAL POSTS MUST BE CONSTRUCTED AFTER EVERY 6 NO. STEPS

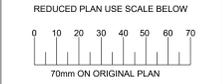
**5. RETAINING AND GABION WALL**

- 5.1 NEW DRY STACK RETAINING WALL POSITIONS AND HEIGHT WILL BE FINALISED ON SITE.
- 5.2 THE BOTTOM ROW OF BLOCKS IS TO BE SET IN WET CONCRETE.
- 5.3 ALL BACKFILL TO BE COMPACTED TO 95% MOD AASHTO DENSITY. UNLESS OTHERWISE AGREED WITH THE ENGINEER, THE CONTRACTOR TO SUPPLY THE ENGINEER WITH RESULTS OF COMPACTION TESTS.
- 5.4 STORMWATER BEHIND THE TOP OF THE WALL TO BE MANAGED IN SUCH A MANNER AS TO PREVENT SCOURING OF THE FILL MATERIAL AND PREVENT THE WALL FROM OVERTURNING.
- 5.5 BACKFILL TO BE BENCHED IN SUITABLE GROUND.
- 5.6 FOUNDATION:  
(a) ENGINEER TO APPROVE FOUNDING CONDITIONS PRIOR TO CASTING OF CONCRETE.  
(b) ALL FOUNDATIONS TO BE CONSTRUCTED ON SOUND INSTTU MATERIAL. NO FOUNDATION WILL BE ALLOWED ON ANY FILL MATERIAL.
- (c) TOP OF FOUNDATION LEVEL TO BE MIN 300MM BELOW FINISHED GROUND LEVEL.
- 5.7 GABION WALLS TO BE CONSTRUCTED AS PER ENGINEERS INSTRUCTIONS.

**6. STANDARD BOLLARD**

- 6.1 CONCRETE GRADE TO BE 20MPa/13mm
- 6.2 FINISH - SMOOTH WITH BOTTOM FACE BRUSHED
- 6.3 FOUNDATION CONCRETE IS TO BE GRADE 20MPa/13mm AND IS HAVE A STEEL TOWE FINISH.

PLAN DESCRIPTION	DWG. NO.	SHEET NO.
CONTINUED FROM		
CONTINUED ON		
CROSS SECTIONS		
TYPICAL CROSS SECTION		
SURVEY LAYOUT		



**DESIGN CONSULTANT**



**BVI Consulting Engineers KwaZulu-Natal PTY (Lid)**

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Approved	Rev. No.	Date

Rev. No.	Date	Description
C	12-01-2024	ISSUED FOR TENDER
B	08/12/2023	ISSUED FOR APPROVAL
A	04/12/2023	ISSUED FOR INTERNAL REVIEW

**Acquisitions completed**

NOTE: No construction work to commence until land and servitude acquisitions have been completed.

DATE	Engineer

**UNDERGROUND SERVICES CHECKED**

SERVICE	DATE	SIGNATURE
S.W. DRAINS		
SEWERS		
WATER MAINS		
G.P.O. CABLES		
ELECTRIC CABLES		
E.C.C. CABLES		
OIL PIPE LINE		

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

Contract No. **3V-28527**

**PROVISION OF INCREMENTAL SERVICES TO SETTLEMENT EMLAZA CX1**

**GENERAL STANDARD DETAILS**

Scales	Reference
AS SHOWN	

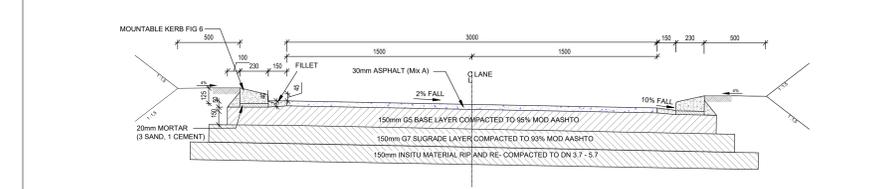
Checked	Date	Signature
KP		
PT		
BS		

Designed by: BS

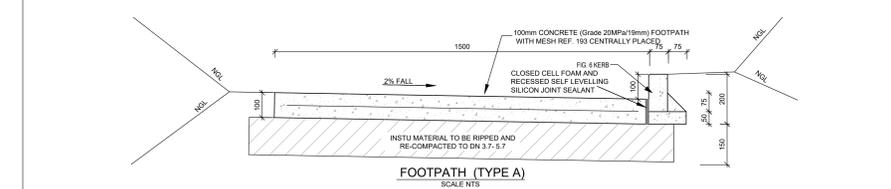
Senior Manager: Development Engineering (South)

Deputy Head: Development Engineering

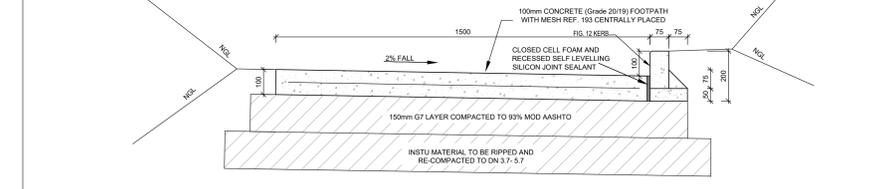
Head: Engineering



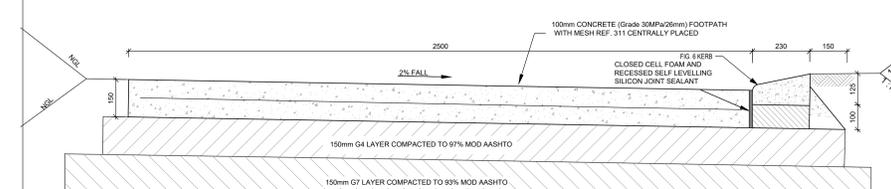
**DETAIL B - ACCESS ROAD DETAIL**



**FOOTPATH (TYPE A)**

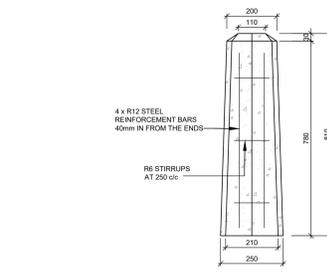


**FOOTPATH (TYPE B)**

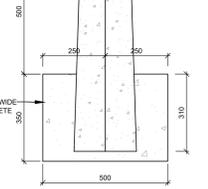


**FOOTPATH (TYPE C)**

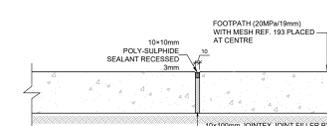
**DETAIL C - TYPICAL FOOTPATH DETAIL**



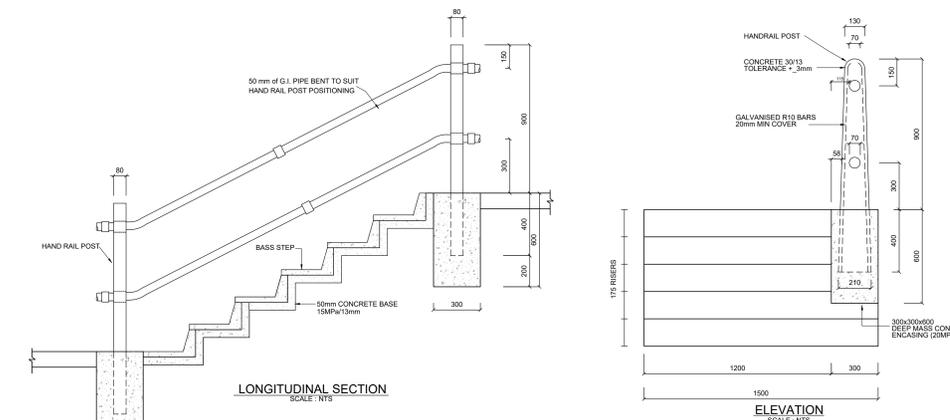
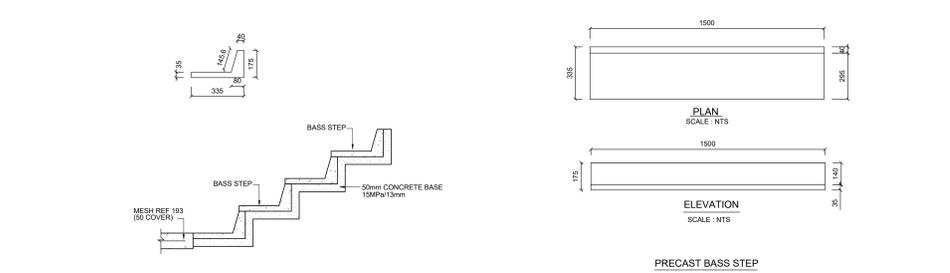
**STANDARD BOLLARD**



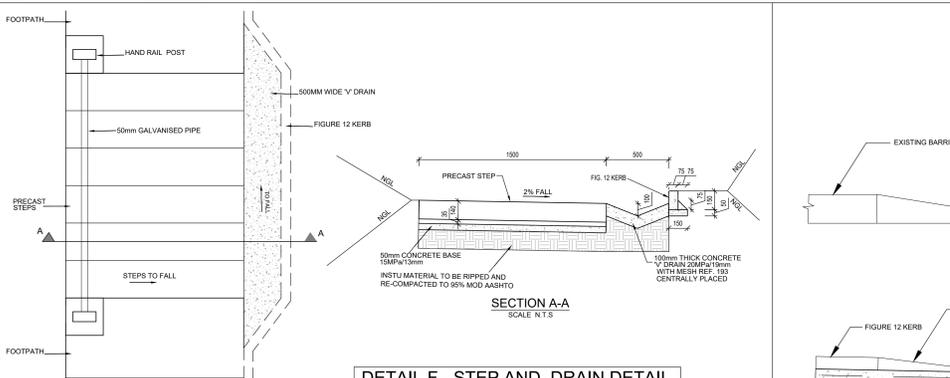
**DETAIL D - BOLLARD**



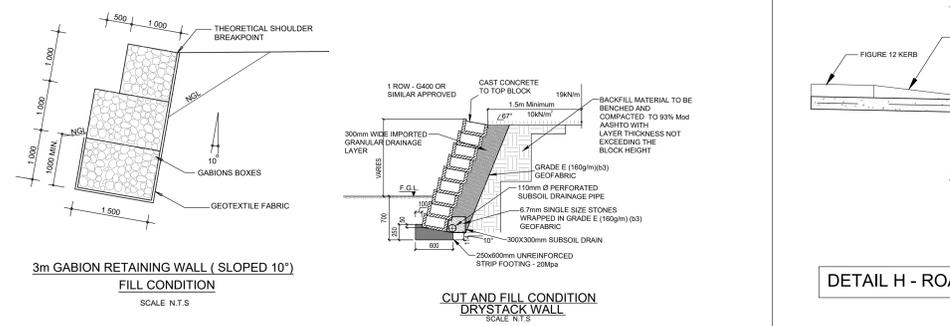
**DETAIL E - JOINT DETAIL**



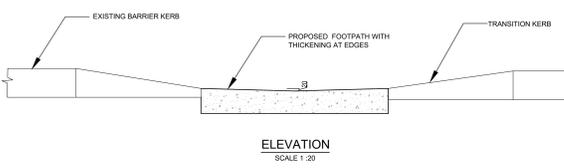
**DETAIL A - STAIRCASE AND HAND RAIL DETAIL**



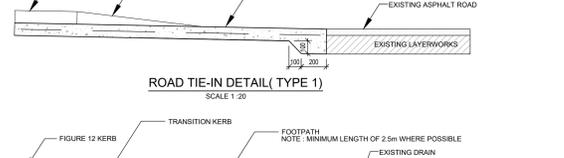
**DETAIL F - STEP AND DRAIN DETAIL**



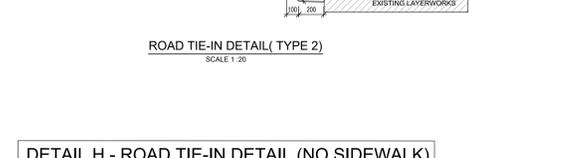
**DETAIL G - GABION AND DRY STACK RETAINING WALL**



**ROAD TIE-IN DETAIL (TYPE 1)**

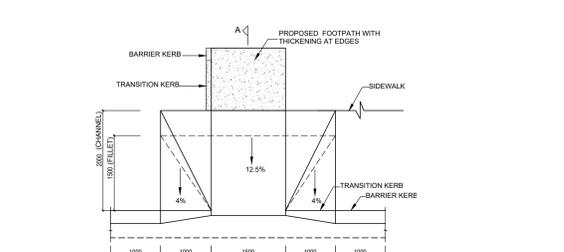


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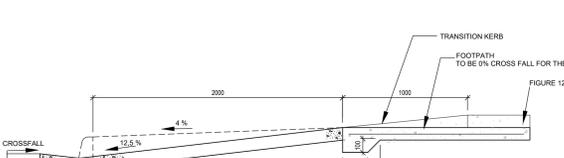


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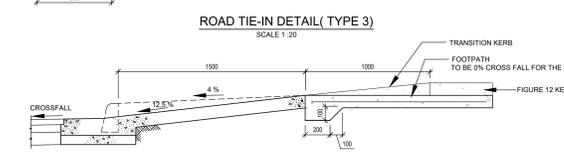
**DETAIL H - ROAD TIE-IN DETAIL (NO SIDEWALK)**



**ROAD TIE-IN DETAIL (TYPE 4)**

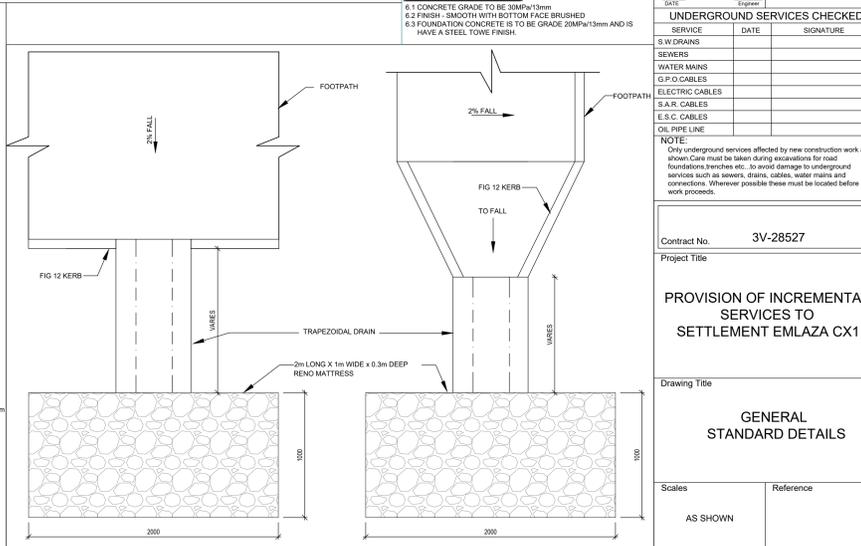


**ROAD TIE-IN DETAIL (TYPE 5)**

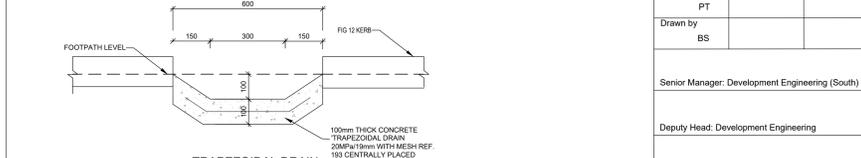


**ROAD TIE-IN DETAIL (TYPE 6)**

**DETAIL I - ROAD TIE-IN DETAIL WITH SIDEWALK**



**RENO MATTRESS AND DRAIN LAYOUT**



**TRAPEZOIDAL DRAIN**

**DETAIL J - RENO MATTRESS AND TRAPEZOIDAL DRAIN**