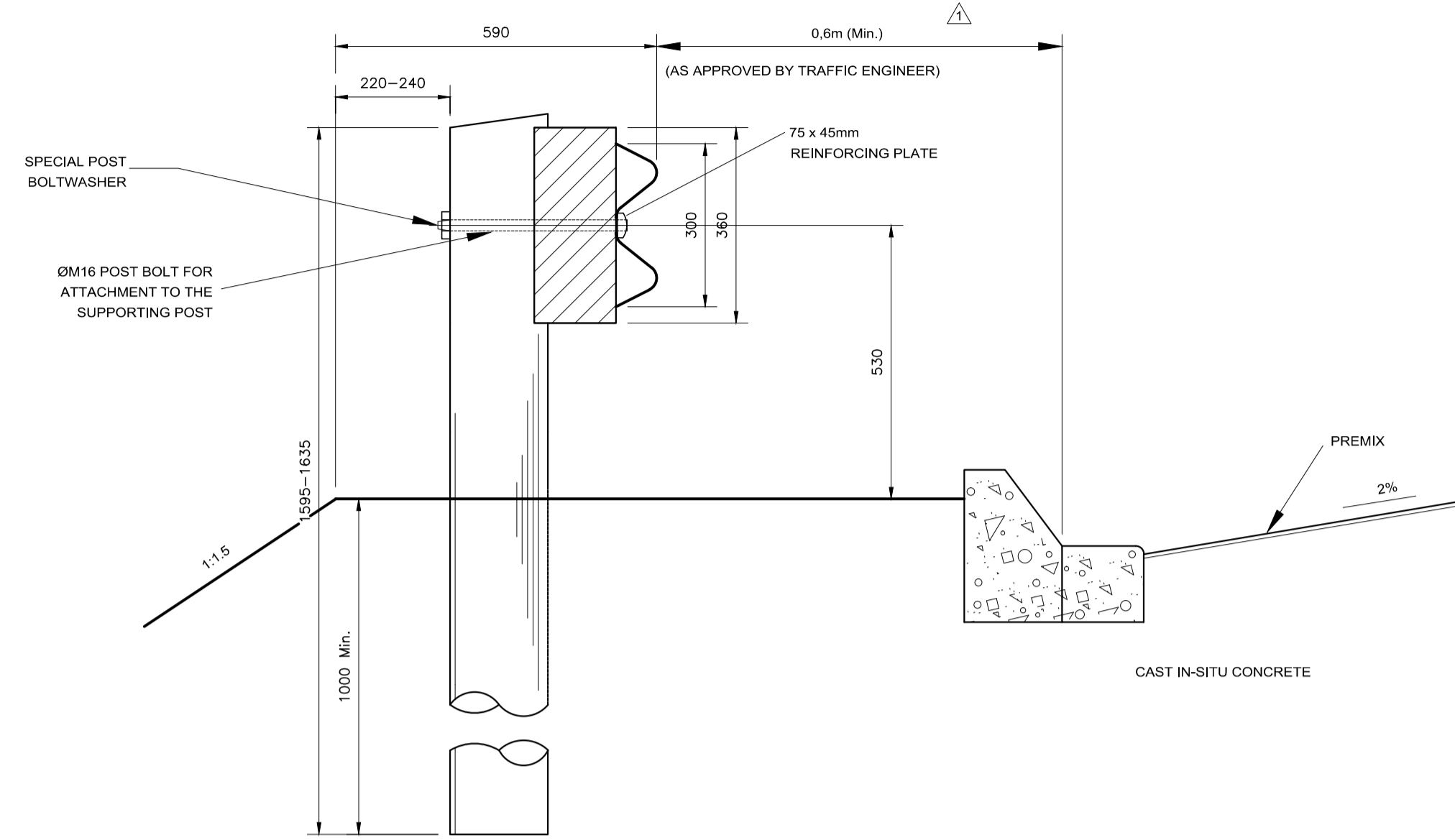
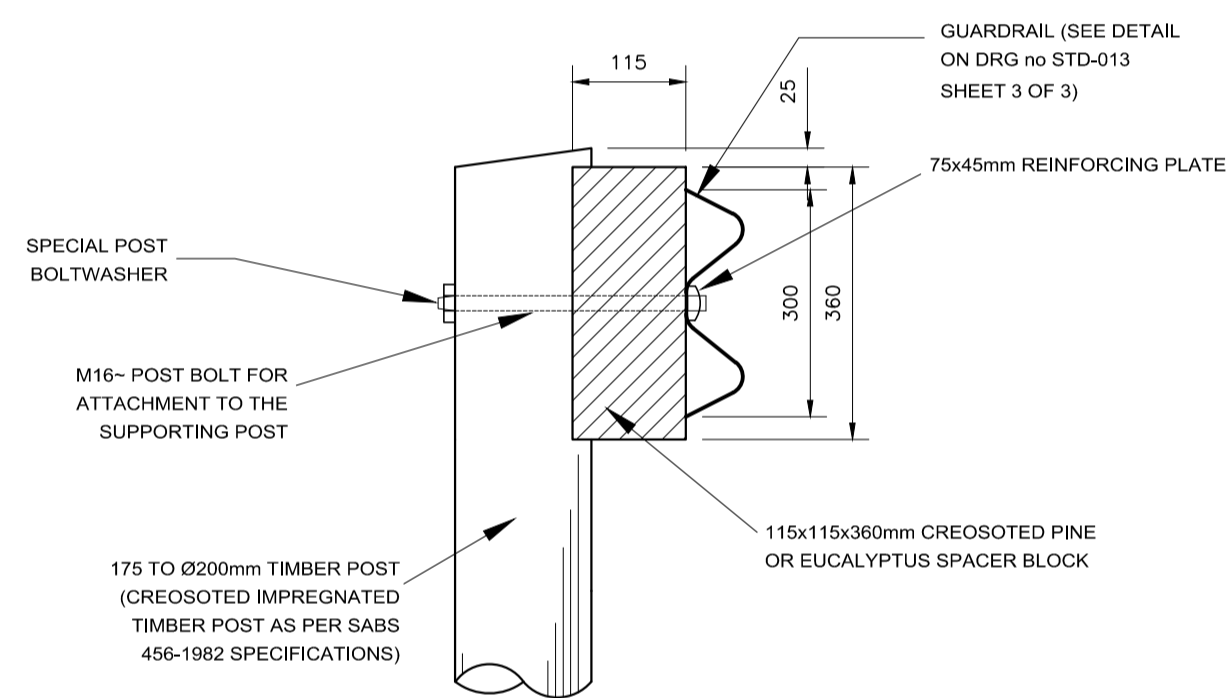


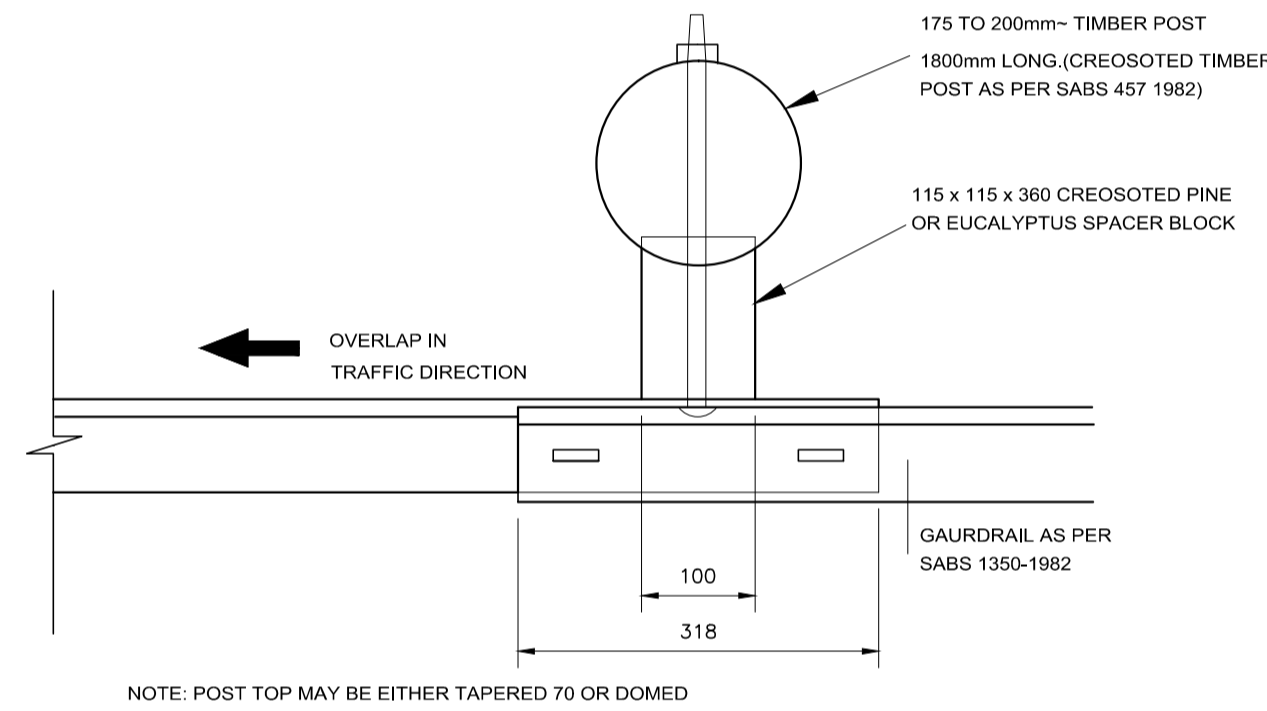
FRONT ELEVATION OF OVERLAP



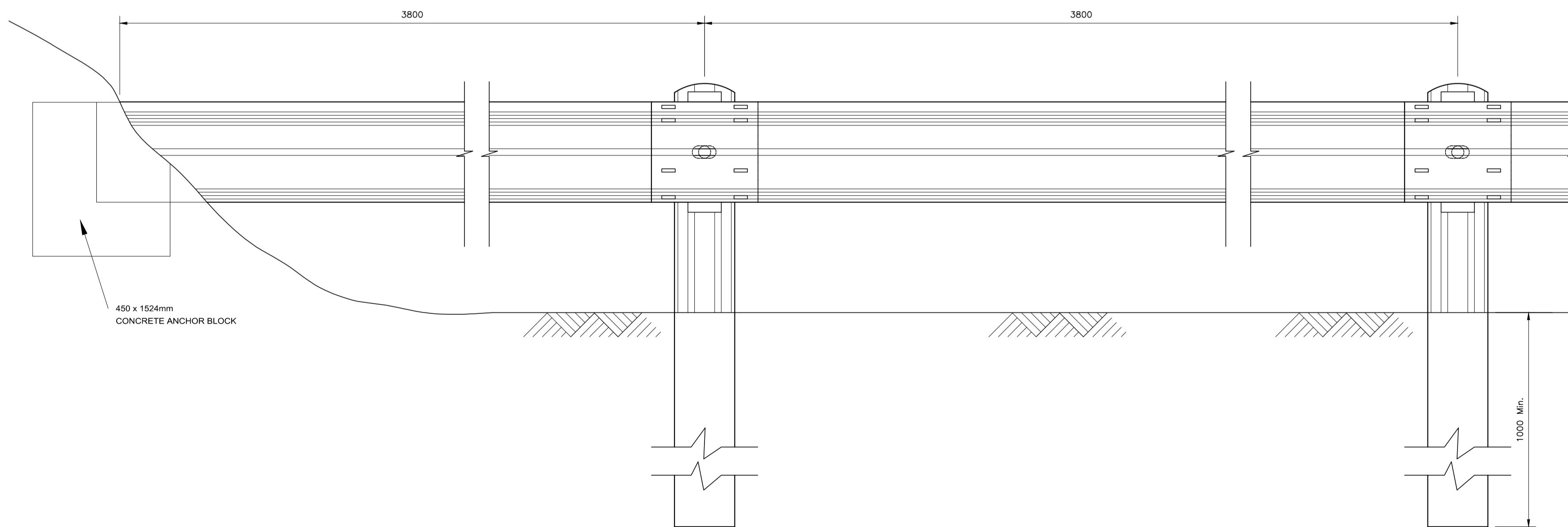
**SIDE ELEVATION
SCALE 1:10**



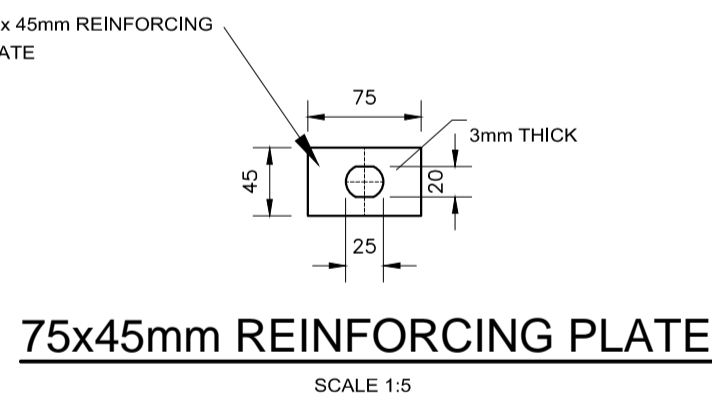
**DETAIL OF FIXING
SCALE 1:10**



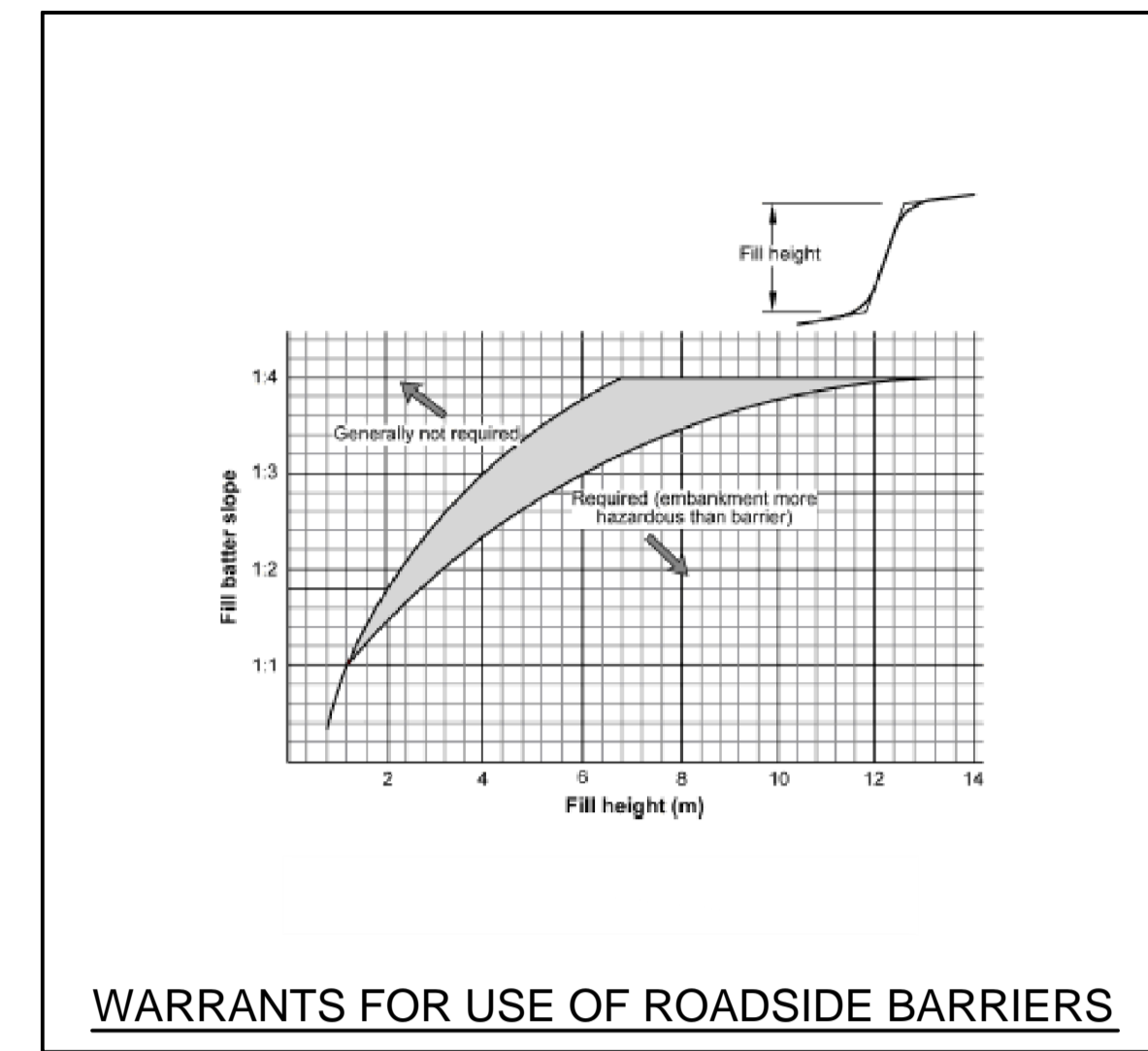
PLAN



PORTION OF GAURDRAIL ANCHORED IN WALL OF EXCAVATION OR SIDE OF FILLING



**75x45mm REINFORCING PLATE
SCALE 1:5**



WARRANTS FOR USE OF ROADSIDE BARRIERS

NOTES AND SPECIFICATIONS

- GUARDRAILS ARE REQUIRED IN THE FOLLOWING CASES:
 - WHERE WATER NEXT TO THE ROAD FORMATION IS DEEPER THAN 1,5m.
 - AT ALL BRIDGES ON SIDE OF ROAD.
 - ON THE OUTSIDE OF CURVES WITH RADI LESS THAN 300m WITHOUT RECOVERY AREAS.
 - WHERE OBSTRUCTIONS ARE LESS THAN 1m FROM THE SHOULDER BREAKPOINT.
 - WHERE AN OBSTRUCTIONS APPEARS TO BE MORE DANGEROUS THAN WHAT A GUARDRAIL WOULD BE.
 - IN THE CASE OF EMBANKMENTS / FILLS, THE WARRANTS DIAGRAM WILL APPLY.
- BEFORE GUARDRAILS ARE ERECTED APPROVAL MUST BE OBTAINED FROM THE EXECUTIVE DIRECTOR: ROADS AND STORMWATER.
- SPECIFICATIONS:
 - BOLT : HIGH TENSILE STEEL 16mm
 - WASHER : STEEL SPRING 10mm THICK.
 - SPACERBLOCK : GUM OR PINE. TREATED WITH CREOSOTE ACCORDING TO ANY METHOD IN SANS 10005.
 - POLE : 150mm TO 230mm GUM OR PINE TREATED WITH CREOSOTE ACCORDING TO ANY METHOD IN SANS 10005.
 - ALL GUARDRAILS SHALL BE GALVANIZED AS SPECIFIED (NOT PAINTED).
 - ALL STRUCTURAL STEEL, INCLUDING TUBES, SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF SABS 763 FOR TYPE A1 OR B1 ARTICLES AS APPLICABLE (OR LATEST).
 - ALSO REFER TO SECTION 611 OF THE STANDARD SPECIFICATION FOR MUNICIPAL CIVIL ENGINEERING WORKS, 3rd EDITION, 2005.

AMENDMENTS				
Nr.	DATE	APPROVED	DESCRIPTION	PAR.

DESIGNED C.B. RAMEKANE	DATE	DRAWN S. AUDIE	DATE
DESIGN CHECKED BY S. NAIDOO	DATE	INFRASTRUCTURE TECHNICAL INFORMATION MANAGEMENT D.J. CHALMERS	DATE

PROJECT STATUS			
<input type="radio"/> CONCEPT DRAWING	<input type="radio"/> TENDER DRAWING	<input type="radio"/> APPROVED FOR CONSTRUCTION DRAWING	<input type="radio"/> AS BUILT DRAWING

PROJECT ENGINEER (CONSULTANT)	INITIALS AND SURNAME	SIGNATURE AND Pr. No.	DATE
INSPECTOR OF WORKS (CITY OF TSHWANE)	INITIALS AND SURNAME	SIGNATURE AND Pr. No.	DATE

CONSULTANT DETAIL	

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT
 Mr P. I. Letorkane
 STRATEGIC EXECUTIVE DIRECTOR
 P.O. BOX 1409
 PRETORIA 0001

Ms. L. V. Kgagakiwe-Piki
 EXECUTIVE DIRECTOR
 P.O. BOX 1409
 PRETORIA 0001

DRAWING APPROVED BY EXECUTIVE DIRECTOR
 Ms. L. V. Kgagakiwe-Piki

SIGNATURE: _____ DATE: _____

LOCATION OF PROJECT:

TYPICAL STANDARD DETAILS

DESCRIPTION OF PROJECT

GUARDRAILS
 DETAILS FOR FIXING, OVERLAP AND ANCHORING.

ROADS AND STORMWATER For Internal Approval	
DIRECTOR: INFRASTRUCTURE PROVISION	SIGNATURE _____ DATE _____
DIRECTOR: INFRASTRUCTURE CONSTRUCTION (PROJECT) MANAGEMENT	SIGNATURE _____ DATE _____
DIRECTOR: INFRASTRUCTURE ASSET MANAGEMENT	SIGNATURE _____ DATE _____
DIRECTOR: TRANSPORT INFRASTRUCTURE PLANNING	SIGNATURE _____ DATE _____
DIRECTOR: INTELLIGENT TRANSPORT SYSTEM AND TRAFFIC ENGINEERING	SIGNATURE _____ DATE _____
DIRECTOR: INFRASTRUCTURE MAINTENANCE MANAGEMENT (IMM)	SIGNATURE _____ DATE _____

CONTRACT No.:	PROJECT No.:
DATE: MAY 2013	SCALE: AS SHOWN
DRAWING NO: STD013	SHEET NO: 1 OF 3
SCALE: 1:1000	REVISION