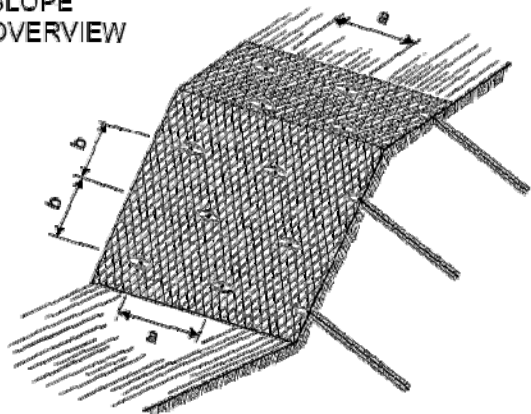
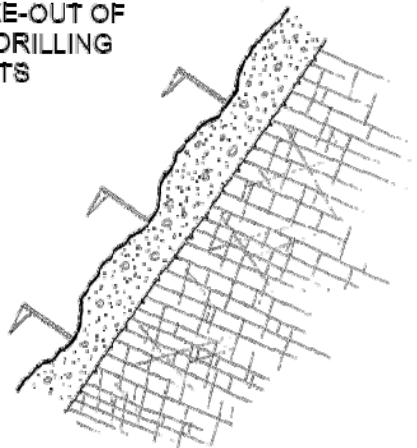


TYPICAL INSTALLATION PROCEDURE

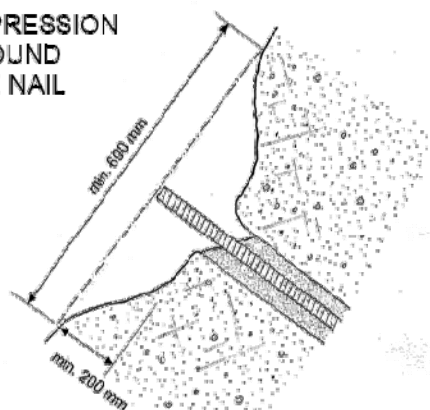
SLOPE OVERVIEW



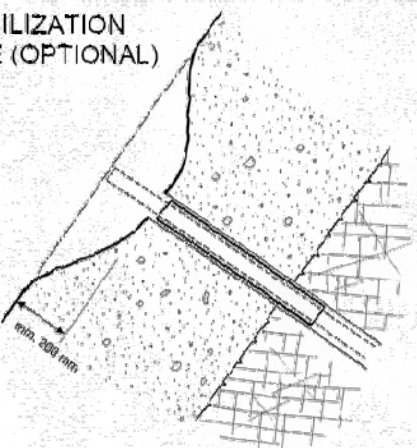
STAKE-OUT OF THE DRILLING POINTS



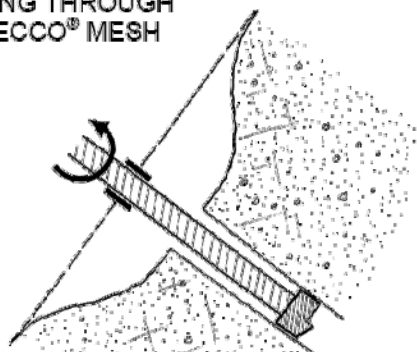
DEPRESSION AROUND THE NAIL



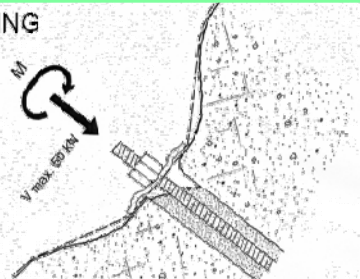
STABILIZATION TUBE (OPTIONAL)



DRILLING THROUGH THE TECCO® MESH



PRETENSIONING



LOAD TABLE

NAIL TYPE	PRESTRESS FORCE, V	REQUIRED TIGHTENING TORQUE	
BAR 22MM	20kN	0,20 kNm	148 ft-lbs
	30 kN	0,30 kNm	221 ft-lbs
	50 kN	0,50 kNm	369 ft-lbs
BAR 25MM	20kN	0,20 kNm	148 ft-lbs
	30 kN	0,30 kNm	221 ft-lbs
	50 kN	0,50 kNm	369 ft-lbs
BAR 28MM	20kN	0,25 kNm	184 ft-lbs
	30 kN	0,35 kNm	258 ft-lbs
	50 kN	0,55 kNm	406 ft-lbs
BAR 30MM	20kN	0,25 kNm	184 ft-lbs
	30 kN	0,35 kNm	258 ft-lbs
	50 kN	0,55 kNm	406 ft-lbs

GENERAL NOTES :-

- ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER UNLESS OTHERWISE STATED.
- DETAILED DESIGN SHALL BE DONE BY CONDUCTING DETAILED SOIL INVESTIGATION AS REQUIRED FOR DESIGN, WHICH SHALL INCLUDE GEOPHYSICAL STUDY AND MINIMUM SIX BORE HOLE INVESTIGATION PER SITE, THREE ON HILL SIDE AND THREE ON INTERMEDIATE LEVEL.
- THE ANALYSIS SHALL BE DONE CONSIDERING SEISMIC ZONE- **IV**.
- THE ANALYSIS SHALL BE DONE CONSIDERING DESIGN BOND STRENGTH OF 60Kpa BETWEEN THE GROUT AND SOIL.
- THE PULL OUT BOND STRENGTH SHALL BE RE VERIFIED AS SITE BY CONDUCTING IN SITU PULLOUT TEST
- THE TYPICAL CONSTRUCTION SEQUENCE IS SHOWN IN THE GIVEN FIGURE AND PHOTOGRAPHS.
- FULLY THREADED GALVANIZED HIGH TENSILE IN-SITU SOIL REINFORCEMENT SHOULD HAVE A MINIMUM YIELD STRENGTH OF 670 MPA AND ULTIMATE TENSILE STRENGTH OF 800 MPA. AS PER TABLE NO-3.

EROSION CONTROL- COIR NON-WOVEN GEOTEXTILE.

- THE FACE WHERE ONLY SLOPE PROTECTION HAS BEEN PROPOSED (HILL SIDE) SHALL BE COVERED WITH EROSION CONTROL COIR NON-WOVEN GEOTEXTILE AS PER TECHNICAL SPECIFICATION.
- THE SOIL LAYERS / ROCK STRATA CONSIDERED FOR ANALYSIS SHALL BE SUBMITTED IN THE DESIGN REPORT AS PER GEOLOGY REPORT IS LISTED BELOW :-

S.No.	Testing Parameters	Acceptable Limits	Frequency	**Responsibility	Code Applicable for Testing
Full Threaded Nail Bar					
A	Ultimate Tensile Strength	800MPa (Minimum)	One Test for 10000 sqm of slope face protection Two Test for More Than10000 sqm but Less Than 50000 sqm of slope face protection Four Test for More than 50000 sqm of slope face protection	Contractor's Scope	EN 10204 or IS 1608
B	Yeild Strength	670 Mpa (Minimum)			
C	Elongation	7%			
D	Galvanization	500 gm/sqm			BS 729

Table number-04

System: High tensile wire mesh

Typical range of application: Slope Retention System
Underground conditions: Soil or heavily disintegrated or weathered rock slopes
Slope Inclination: up to 80°
Greening: Coir non-woven Geotextile and turfing

High-tensile steel wire mesh

- Wire diameter [mm]:3.0
- Tensile strength high tensile steel wire [N/mm2]:1'770
- Tensile resistance of a wire [kN]:12.5
- Mesh width [mm]:65
- Surface finish: GALFAN Coating according to EN 10244-2:2001 CLASS B Zn95Al5
- Thickness of coating [g/m²]:min. 150
- Tensile strength of mesh [kN/m]:150
- Bearing resistance against puncturing [kN]:180 (Spike plate P33)
- Bearing resistance against slope-parallel tensile stress [kN]:30 (Spike plate P33)

THE DRAWING IS FOR REFERENCE ONLY. CONTRACTOR SHALL SOURCE THE TECHNOLOGY /SYSTEM FROM SPECIALIZED TECHNOLOGY PROVIDER ADOPTING MATERIALS OF GIVEN SPECIFICATION OR HIGHER. CONTRACTOR TO SUBMIT DETAILED WORK METHODOLOGY, SPECIALIZED AGENCY CREDENTIALS FOR NHIDCL APPROVAL PRIOR TO WORK.

THE SUITABILITY, SUSTAINABILITY, AND STABILITY OF THE DESIGN AND STRUCTURES ARE TO BE CERTIFIED BY INDIAN INSTITUTE OF TECHNOLOGY (DELHI/KANPUR/MUMBAI/KHARAGPUR/ROORKEE) BEFORE THE COMMENCEMENT OF WORK.

REVISIONS

REV	DATE	DRN	CHK

AMENDMENTS

CLIENT:



National Highways & Infrastructure
Development Corporation Ltd.

PROJECT NO. ---		SCALE	SHEET SIZE A3
DRAWN	CHECKED BY:		DATE
	INITIAL	FINAL	28/12/2016
DRAWING NO.		SHEET No.	REV.
NHIDCL/01		02/02	---
DRAWING STATUS: ---			

PROJECT:

STRUCTURE:

TITLE:

SIKKIM-RHENOK TO PAKYONG