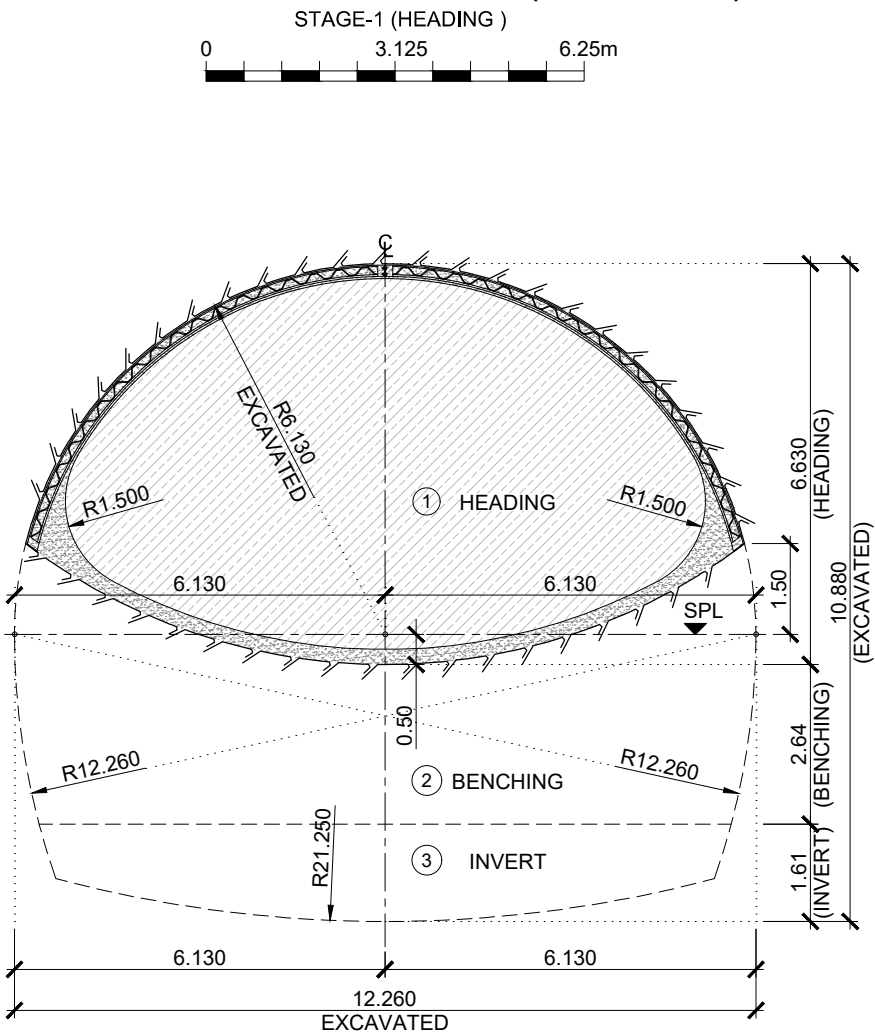
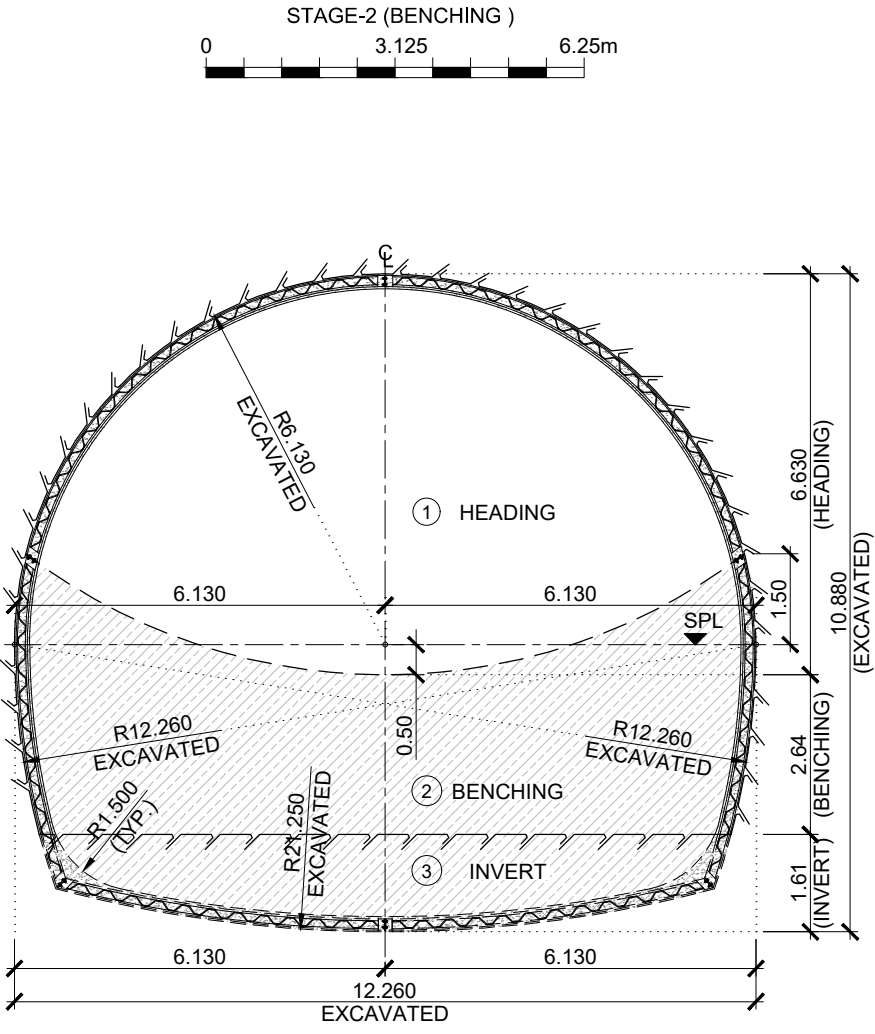


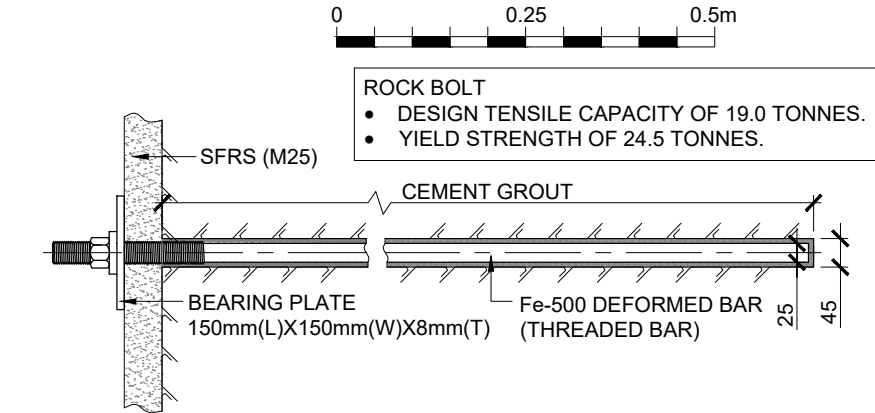
EXCAVATION STAGES (CLASS-IV)



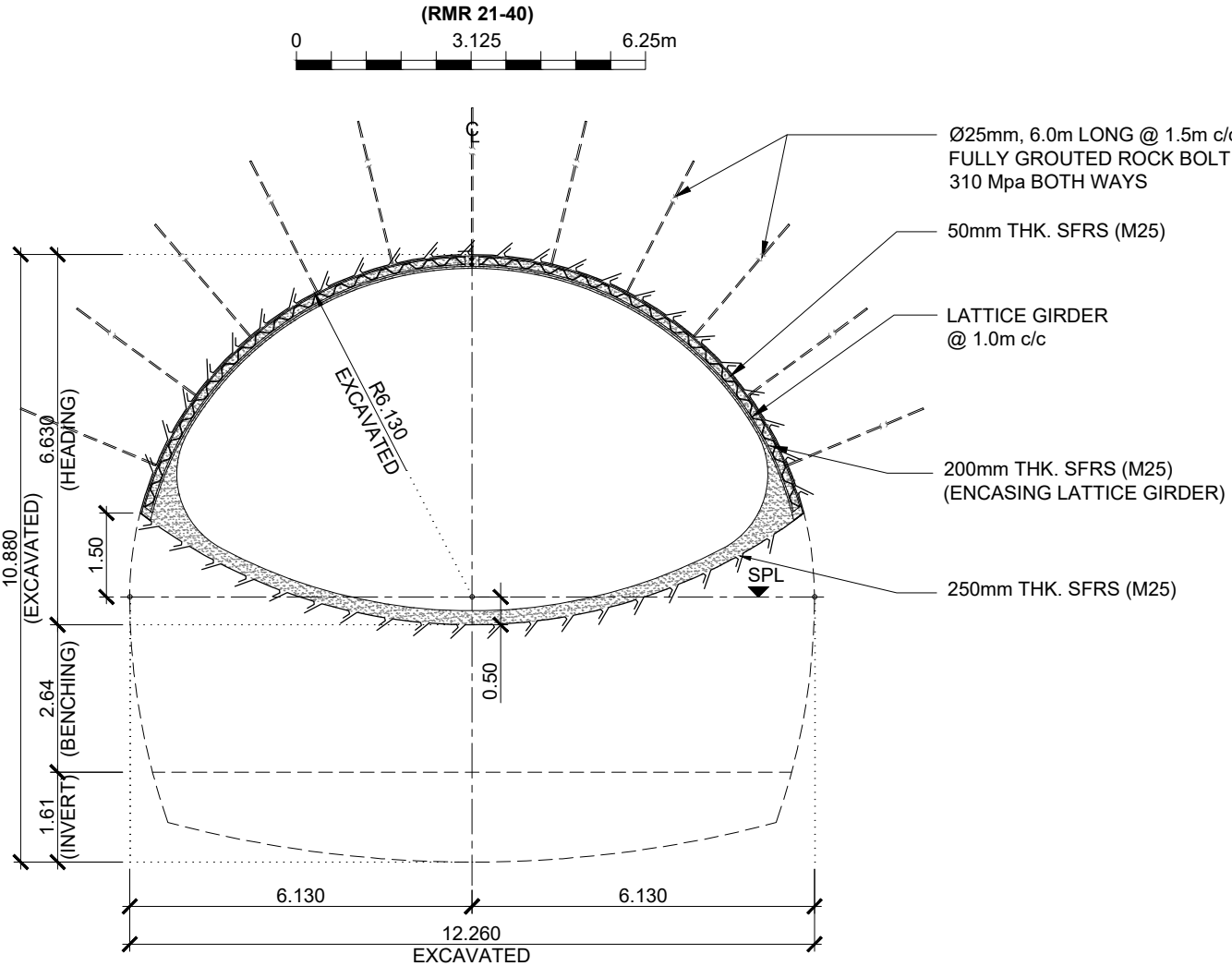
EXCAVATION STAGES (CLASS-IV)



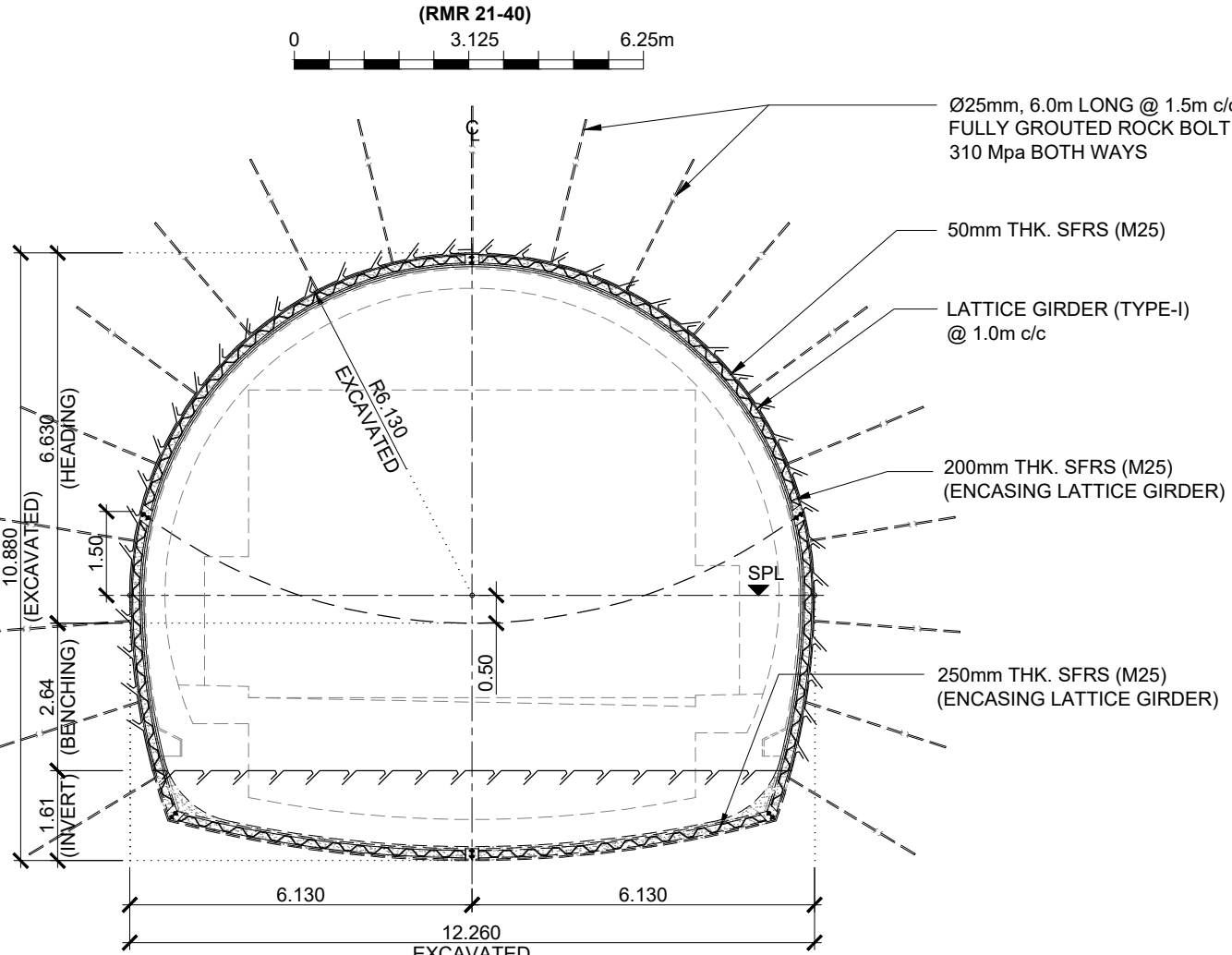
FULLY CEMENT GROUTED SPOT / ROCK BOLT



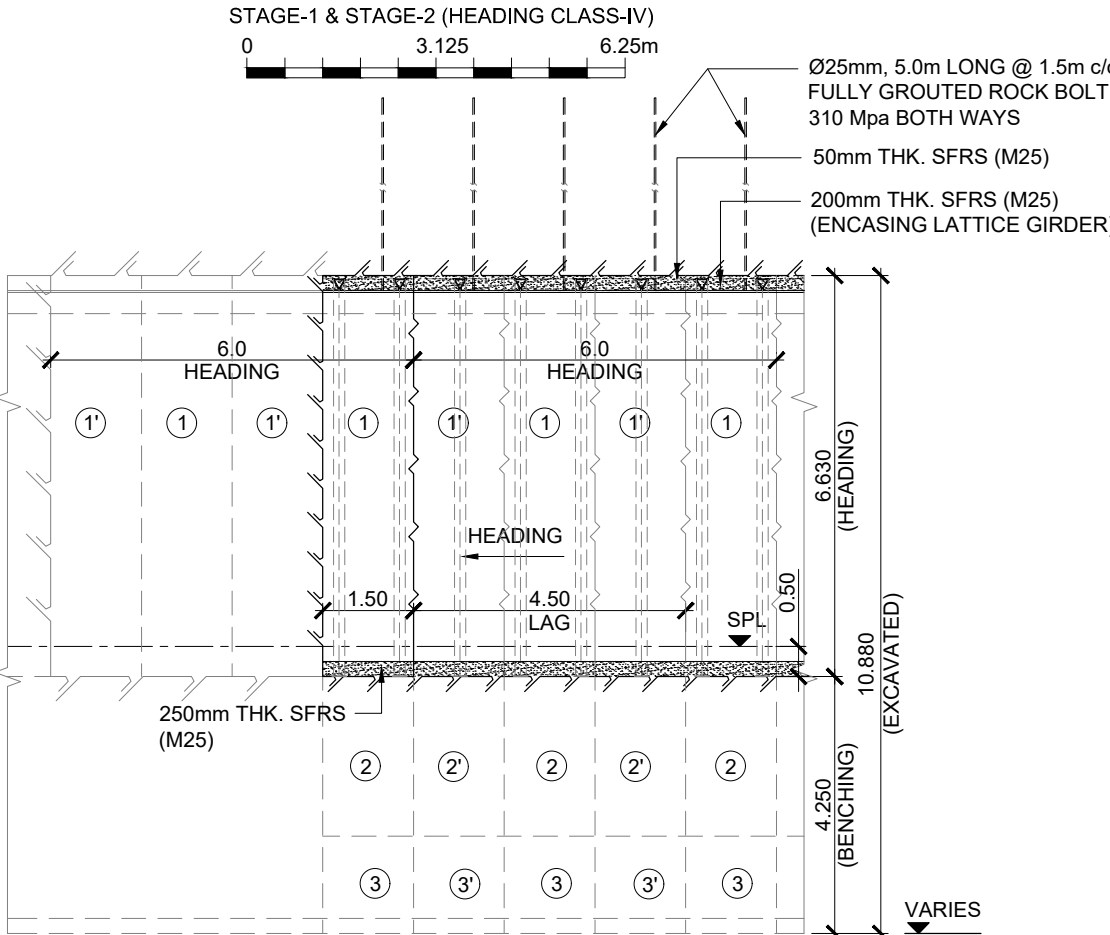
SUPPORT SYSTEM (CLASS-IV)



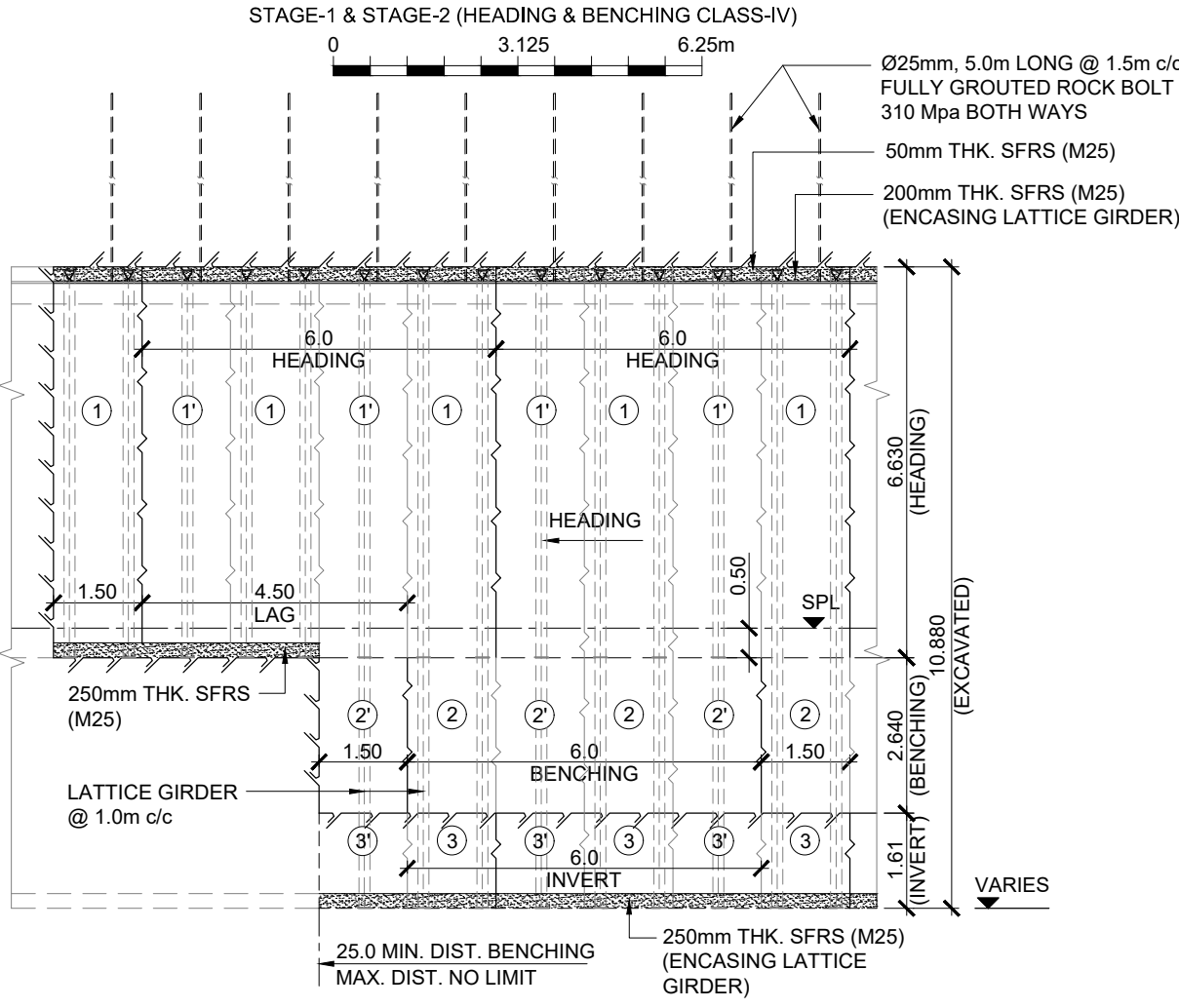
SUPPORT SYSTEM (CLASS-IV)



LONGITUDINAL SECTION



LONGITUDINAL SECTION



NOTES:

- ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
- NO DIMENSION SHALL BE MEASURED, ONLY WRITTEN DIMENSIONS ARE TO BE TAKEN AS CORRECT.
- ALL ROCK SUPPORT AS PER CONSTRUCTION SEQUENCE SHALL BE PROVIDED BEFORE BLASTING OF SUBSEQUENT ROUND.
- ADDITIONAL ROCK SUPPORT MAY BE INSTALLED AS PER SITE CONDITION.
- SHOTCRETE AS SPECIFIED SHALL BE APPLIED CONFORMING TO THE TECHNICAL SPECIFICATIONS.
- DRAINAGE HOLES SHALL BE PROVIDED WHEREVER REQUIRED.
- ALL Ø25mm ROCKBOLTS SHALL HAVE THE MINIMUM STRENGTH OF 190kN. THE STRENGTH OF THE ROCKBOLTS SHALL BE CONFIRMED AT SITE THROUGH PULL OUT TEST.
- ALL ROCK BOLTS SHOULD BE OF 310 Mpa BOTH WAYS
- THE GRADE OF SFRS SHALL BE M25.
- FACE SCALING AND SPOT BOLTING AT FACE SHALL BE DONE IF REQUIRED AS PER SITE CONDITION.
- FACE BOLTING AND SHOTCRETE SHALL BE CARRIED OUT IN CLASS IV AND V, WHEREVER REQUIRED.
- FOREPOLING SHALL BE CARRIED OUT IN CLASS IV, WHEREVER REQUIRED TO AVOID OVER BREAK AT CROWN.
- THE NUT OF THE GROUTED BOLT SHALL BE TIGHTENED 12 HRS AFTER INSTALLATION TO ACHIEVE A FORCE AT THE ANCHOR PLATE OF APPROXIMATE 20 KN. THIS FORCE SHALL BE APPLIED BY CALIBRATED TORQUE WRENCH

Project Title				This drawing is the property of AGNITIO INFRASTRUCTURE PROJECTS PVT LTD and must not be passed on to any person or body not authorised by us to receive it nor be copied or otherwise made use of either in full or in part by such person or body without our prior permission in writing.				Client				Drawing Title: TUNNEL EXCAVATION & SUPPORT CLASS IV			
Consultancy Services for carrying out Feasibility Study, Preparation of Detailed Project Report (DPR) and providing pre-construction services in respect of 4 Lining of Kohima Bypass connecting NH-39 (New NH-02), NH-150 (New NH-02), NH-61 (New NH-29) and NH-39 (New NH-02) on Engineering, Procurement and Construction (EPC) mode in the state of Nagaland				Original Size: A2				National Highways & Infrastructure Development Corporation Ltd				Drawing No.: HEC-AIPPL/NHIDCL/KB/TUN/7			
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												HIGHWAY ENGINEERING CONSULTANT IN ASSOCIATION WITH AGNITIO INFRASTRUCTURE PROJECTS PVT LTD			