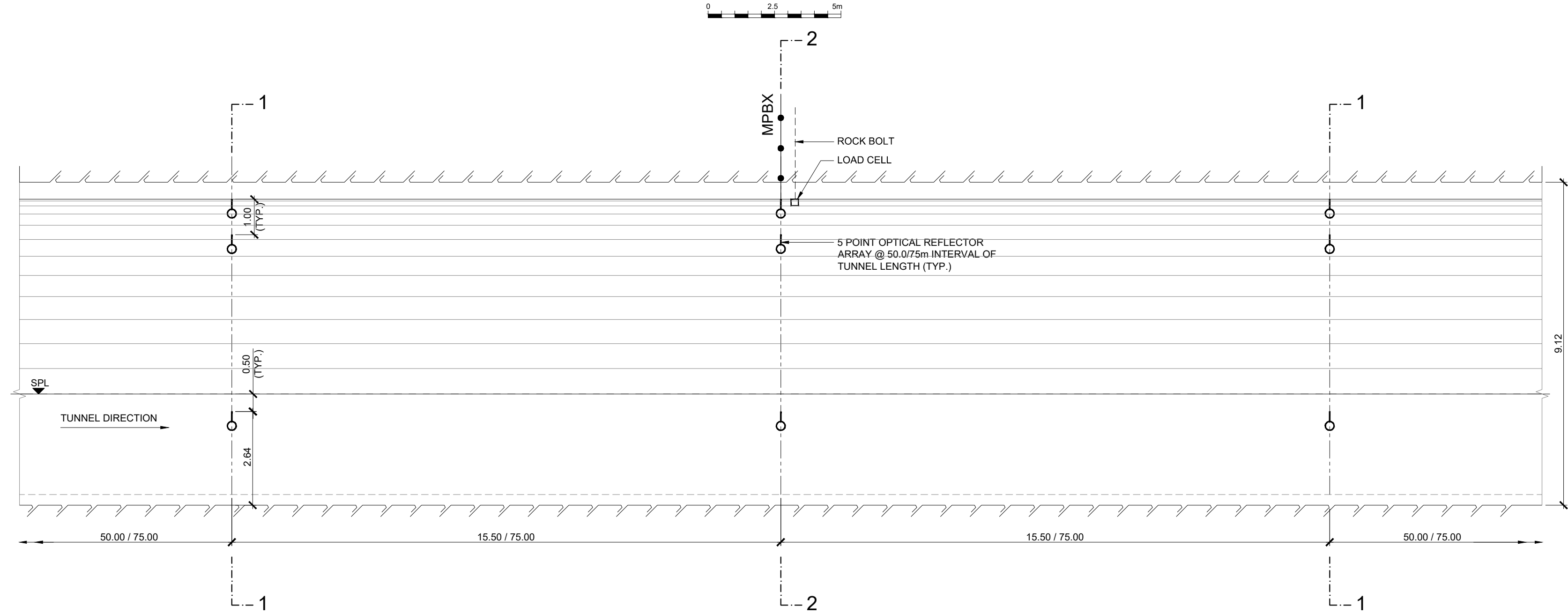
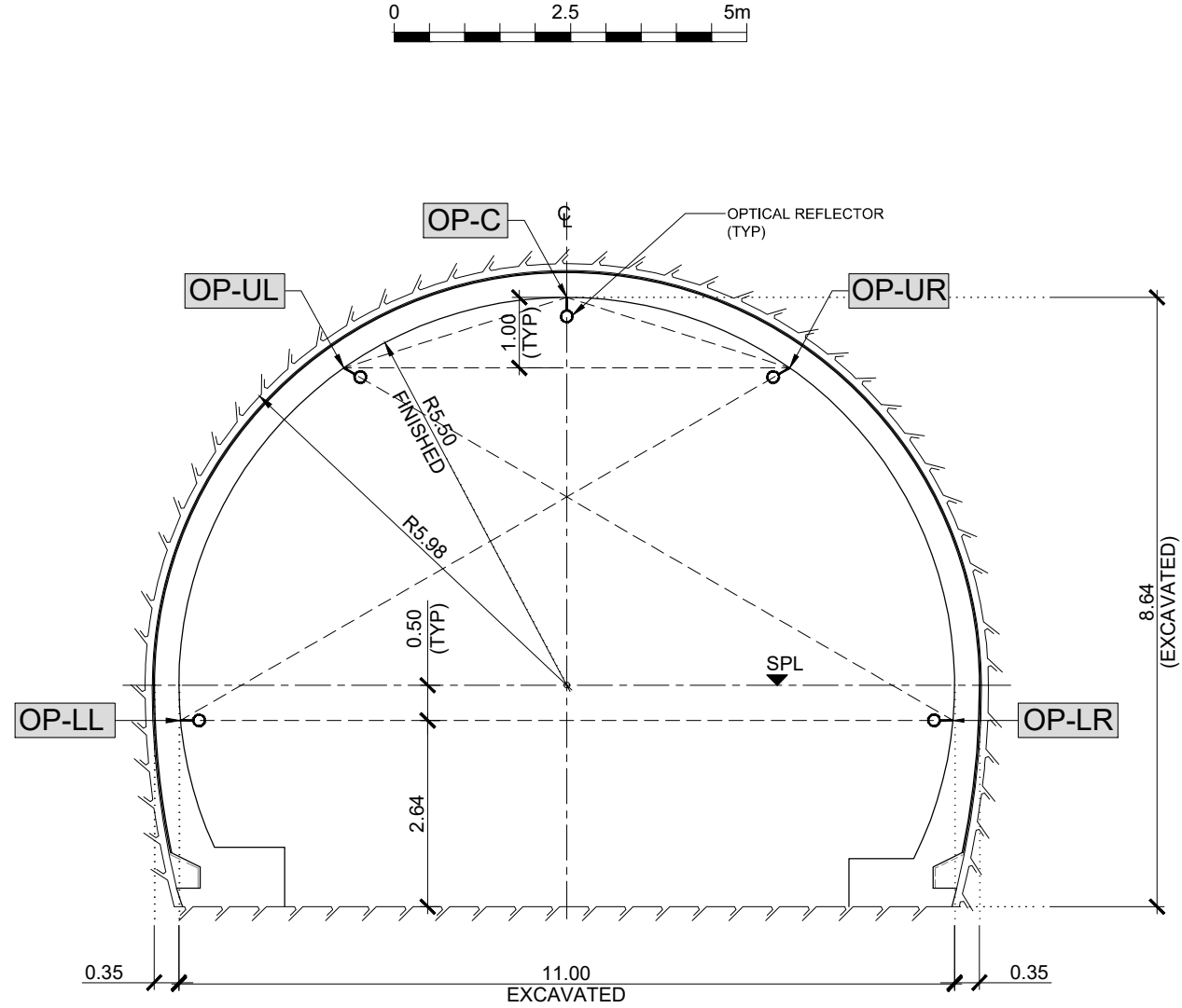


TYPICAL LONGITUDINAL SECTION OF ADIT

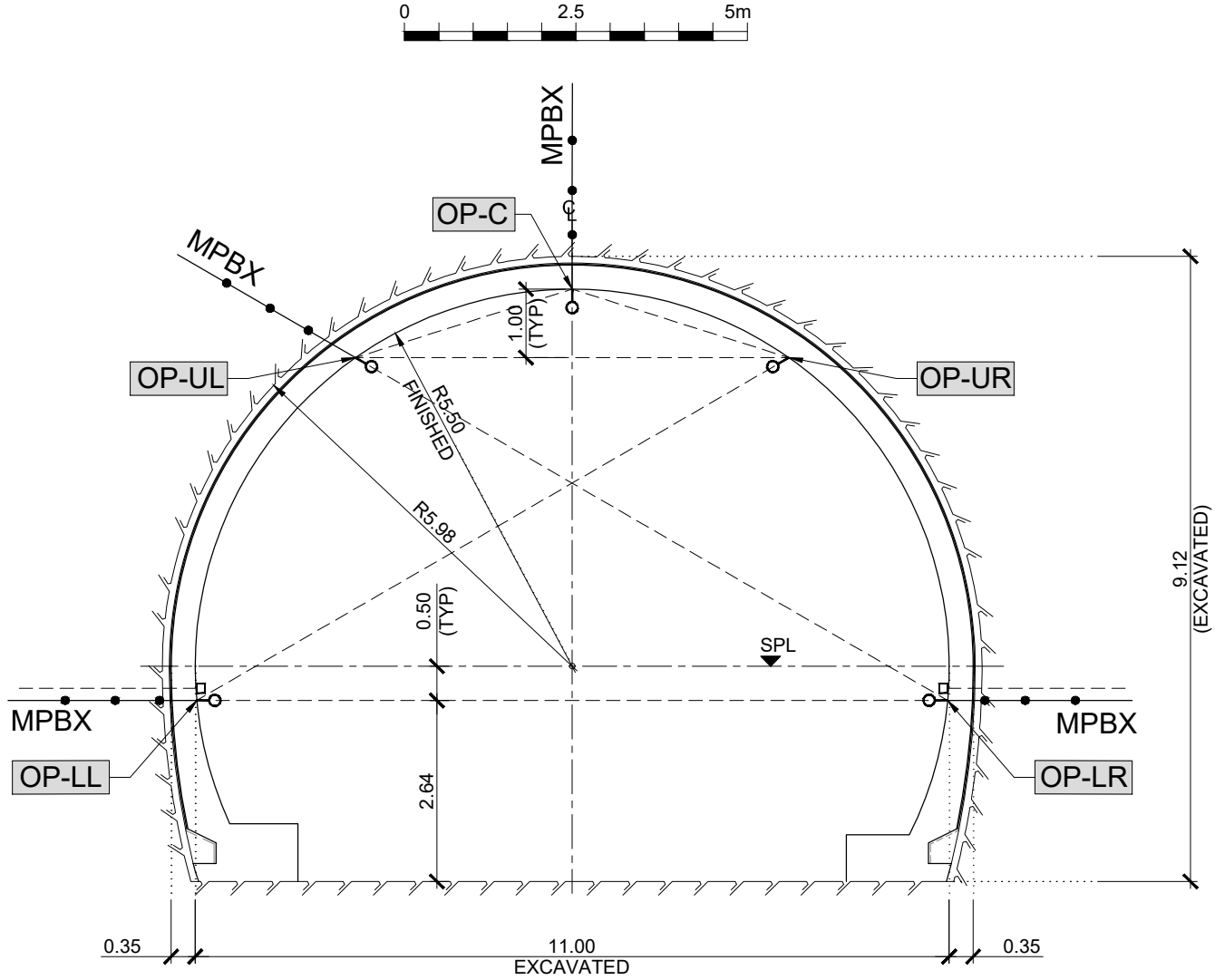


BILL OF MATERIALS		
S NO	SIGN	INSTRUMENT
1		DEFORMATION MONITORING POINT
2		MULTI-POINT BOREHOLE EXTENSOMETER ANCHOR DEPTH - 2.0m, 4.0m & 6.0m
3		LOAD CELL

**SECTION 1-1**  
(FOR ROCK CLASS I, II & III)  
(FOR ABSOLUTE DEPLACEMENT MEASUREMENT EVERY 75.0m INTERVAL OF TUNNEL LENGTH)  
(SECTION SHOWING INSTALLATION OF 5 POINT OPTICAL REFLECTOR)



**SECTION 2-2**  
(FOR ROCK CLASS IV & V)  
(FOR ABSOLUTE DEPLACEMENT MEASUREMENT EVERY 50.0m INTERVAL OF TUNNEL LENGTH)  
(SECTION SHOWING INSTALLATION OF 5 MPBX AND LOAD CELL)




**LEGEND:-**

- OP-C = CROWN
- OP-UL = UPPER LEFT
- OP-UR = UPPER RIGHT
- OP-LL = LOWER LEFT
- OP-LR = LOWER RIGHT

**NOTES:-**

- ALL DIMENSIONS ARE IN METRES EXCEPT SHOWN OTHERWISE
- GROUND DEFORMATION CONTROL INCLUDES 3D-OPTICAL AT FIVE REFLECTORS BENCH MARKS INSTALLED ON MEASUREMENTS (DEFORMATION MONITORING POINTS) AT THE TUNNEL SURFACE EACH CROSS SECTION USING STANDARD SURVEYING INSTRUMENTS DISTANCE MEASUREMENT). (TOTAL STATIONS WITH INTEGRATED.
- IN NORMAL CASE MEASUREMENTS ARE RECORDED, PROCESSED IN OFFICE AND IMMEDIATELY SUBMITTED TO CONCERN PERSONS, WHILE IN ANY EMERGENCY SITUATION DATA IS PROCESSED IN BATCH MODE AND IMMEDIATELY COMMUNICATED (DISPLACEMENT INCREMENT), ALL OTHER INTERPRETATION PLOTS WILL THEN BE PROCESSED IN OFFICE.
- MEASUREMENTS OF THE TARGET INSIDE THE TUNNEL ARE OBTAINED BY PLACING THE TOTAL STATION AT PRE DEFINED RUGGED STATIONS (BOLTED ON THE TUNNEL WALL) AND SUCCESSIVELY MOVING THE INSTRUMENT FORWARD (TOWARDS THE TUNNEL EXCAVATION FACE) WHILE MEASURING THE COORDINATES OF THE VISIBLE TARGETS FROM EACH STATION. THE ACCURACY OF THESE MEASUREMENT SHALL BE AS PER TECHNICAL SPECIFICATION ( AS PER SUB-CLAUSE 33.3.9 OF GTS OF VOLUME 04).
- THE DEFORMATION MONITORING DATA SHALL BE COMMUNICATED ON LINE TO THE DESIGN DEPARTMENT.
- IS:4756 SHALL BE FOLLOWED FOR SAFETY PRECAUTIONS.
- WHEREVER CHANGE IN GEOLOGY IS OBSERVED (TO BE IDENTIFIED BY SITE GEOLOGIST OF M/S \_\_\_\_\_ AND OWNER AT SITE), MONITORING SECTION SHALL BE PROVIDED AT THE INTER FACE.
- THE MPBX (MULTI-POINT BOREHOLE EXTENSOMETER) SHOULD BE PLACED AT CLOSE INTERVAL ON EITHER SIDE OF DEFORMATION MONITORING POINTS AS PER SITE CONDITION.

				Project Title	<div>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.</div> <div>Original Size: <b>A2</b></div> <div>Path -</div> <div>Plotting Scale: 1:100</div>	<div>Client</div> <div> National Highways &amp; Infrastructure Development Corporation Ltd</div>	Drawing Title: TUNNELS INSTRUMENTATION DETAILS				<u>CONSULTANT</u>					
				Consultancy Services for carrying out Feasibility Study, Preparation of Detailed Project Report (DPR) and providing pre-construction services in respect of 4 Lining of <b>Kohima Bypass</b> 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			Drawing No.: HEC-AIPPL/NHIDCL/KB/TUN/11				Sheet : OF 45		HIGHWAY ENGINEERING CONSULTANT IN ASSOCIATION WITH AGNITIO INFRASTRUCTURE PROJECTS PVT LTD			
							Scale :- NTS									
Revision Details	Chk By	Date	Suffix				Drn S.TYAGI	Dgn. P.MISHRA	Appd A.C. GARG	Date OCT-2018						