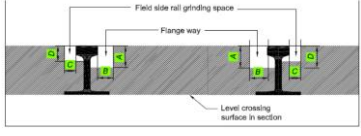


Level Crossing Tools to Purchase FY2024/25						
Item No.	Name of the tool	Quantity (no.)	Specification (Physical qualities: size, weight, height, material type)	Function of the tool	Training How to use the product required (Yes/No)	Sketches
Discipline: Level Crossing						
1	2m Wooden metric folding ruler (non-conductive)	1	Folding Ruler, Material must be wooden, Measurement units in millimetre, mm).	Metric measurements of distances between two positions/points in millimeters spaced very close. E.g. measuring the space in mm between the rail and level crossing block (i.e. between the field face (C) and gauge face (B) of the rail and the edge of the level crossing block. Sketch shown	No	
2	Digital inclinometer or clinometer	1	Product weight not more than 500g; product size/dimension not more than 100 mm X 100 mm X 50 mm, colour screen, small and simple display and strong sense of science and technology Automatically switch the screen Multi-unit switching (angle and slope, ° and %), sensitive response, accurate detection, accuracy up to 0.1°; Lock the data, the following data is actual measurement, have battery and must be rechargeable, With strong magnets on all sides, Angle detection; Slope detection; Level detection, working temperature range 0°C to +50°C, Working hours to be more than 4H at a time, Auto Power Off.	Measures the grade or angle of slope/tilt, elevation/depression of the road surface or an object with respect to gravity. The resulting measurement must be in percentage (%).	Yes	
3	Measuring Wheel (non-conductive)	1	Folding design, foldable measuring wheel, Weight not more than 2.5kg, Wheel diameter 20 to 35 cm, height between 45cm - 60 cm, Material: Plastic Rubber, Accuracy/Tolerance: < 0.25 %.	Professional surveying and measuring of distance between positions in rail/road engineering environment.	No	
4	Ultra Sonic Wire height measurement (non-conductive)	1	Product: Cable height meter, Working temperature range up to 40/50°C, Measurement units in meters and mm (if available), to determine the height of overhead track cables up to 23m or as long as it is more than 20m, Weight not more than 0.8kg, Dimensions not more than 250 mm X 150 mm X 100 mm, Accuracy 0.5%, Long life battery (if recharge would be an advantage), must be able to indicator if it is low battery, Auto Power Off, fast measurement, easy to use and reliable so that the product must not have any physical connection to cables or wires to obtain measurement while onsite for safety reasons. Must be able to give measurements in metres (m) and millimetres (mm), Must be able to measure more than 3 wires at a time.	Measure the height of the contact wire in relation to the rail crown height and the height gauge wire height in relation to the road surface.	Yes	
5	Digital stopwatch timer	1	Product measurement units in seconds (sec), Very light (not more than 0.09kg) and have hole to carry along the neck, not more than the following dimensions (W x D x H) mm 80 x 30 x 90, Measuring capacity not less than hr: min: sec 12:59:59, equipped with acoustic alarm (Yes), Colour of the device not to be red or green for railways safety operations, preferable a black digital stopwatch, working temperature: 0°C to +50°C	Determine time spent	No	
6	Digital laser distance meter (horizontal measurement)	1	High accuracy Laser distance, determine horizontal distance of up to 500 metres (maximum horizontal measurable distance of 500m), Light weight device, energy saving battery (benefits if it is rechargeable), +/-1mm accuracy, Low battery indicator, working temperature: 0°C to +50°C, Colour of the device not to be red or green for railways safety operations.	Measuring horizontal distance in metres from one position to another for up to or than 500 meters	Yes	
7	Digital track gauge and superelevation measuring device (for a 1067mm railway/track gauge)	1	Must be able to be used on a 1067mm or 1065mm railway track dominantly used in South African railways. Material: must be waterproofed, fully insulated (non-conductive), light carry case, rechargeable battery and must be able to displays the measured readings on the screen (e.g., sketch Column G), Low battery indicator, reading accuracy: up to ±0.5 mm. Using 1067mm as the permissible gauge, track gauge must be able to measure beyond C-standards measurements of: *Track gauge: -20 mm to +40 mm [C-standard is -10mm to +25mm], that is 1067 - 10 = 1057mm, etc.	Used for measuring the track gauge and superelevation measurements of the track (i.e., at the level crossings, to determine the gauge and superelevation of the track) with reference to Field Sheet 7 found in Annexure A, level crossing Physical Assessment, level crossing standards, SANS 3000 2-2-1:2021.	Yes	