



V05

Portland to Maroona

Document Status

Version #	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
3.1	24 July 24	Engineering Services	Stakeholders	Principal Rolling Stock Interface Engineer	Manager Engineering Services 19/08/2024

Curve and Gradient Diagrams – Data Sources and Descriptions

Data Type	Data Source	Data Description
Grade	ARTC Asset Register	Horizontal and vertical geometry obtained using Reigl LiDAR, GPS, IMU and Gyroscope fitted to ARTC Hi-Rail vehicle.
Curvature	ARTC AK Car	Curvature data manually regressed from ak.geometry table. Data has not been validated against design curvature.
Platforms	ARTC Asset Register	Asset locations obtained through TrackData.
Tunnels		
Turnouts		
Level Crossings		

DISCLAIMER:

1. The following diagrams are a representation only.
2. Refer to the Curvature Master for controlled curvature data.
3. Refer to ARTC Network Information Books diagrams for detailed information.
4. This document is uncontrolled when printed.
5. **THE CURVATURE DATA USED FOR THIS SPECIFIC CORRIDOR HAS BEEN OBTAINED THROUGH A MANUAL REGRESSION METHOD. IT IS OF A LOWER QUALITY AND STRICTLY SERVES AS AN APPROXIMATE REPRESENTATION.**

Interpretation of Diagrams

Level Gradient

Tunnel

Elevation Profile

Turnout

Level Crossing

Route Name with
Diagram Start
and End Point

Platform and
Location

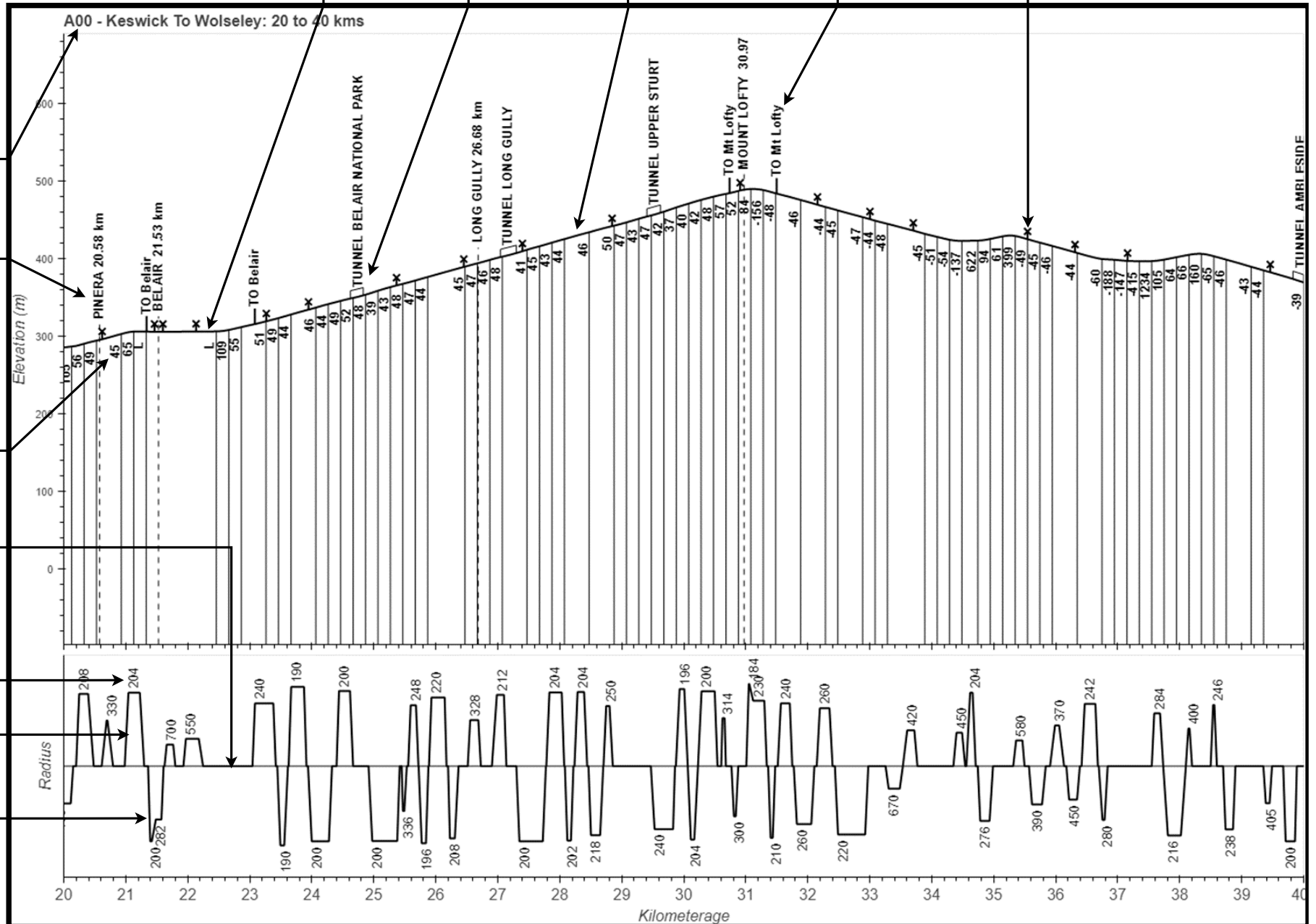
Gradient

Centreline

Radius in Metres

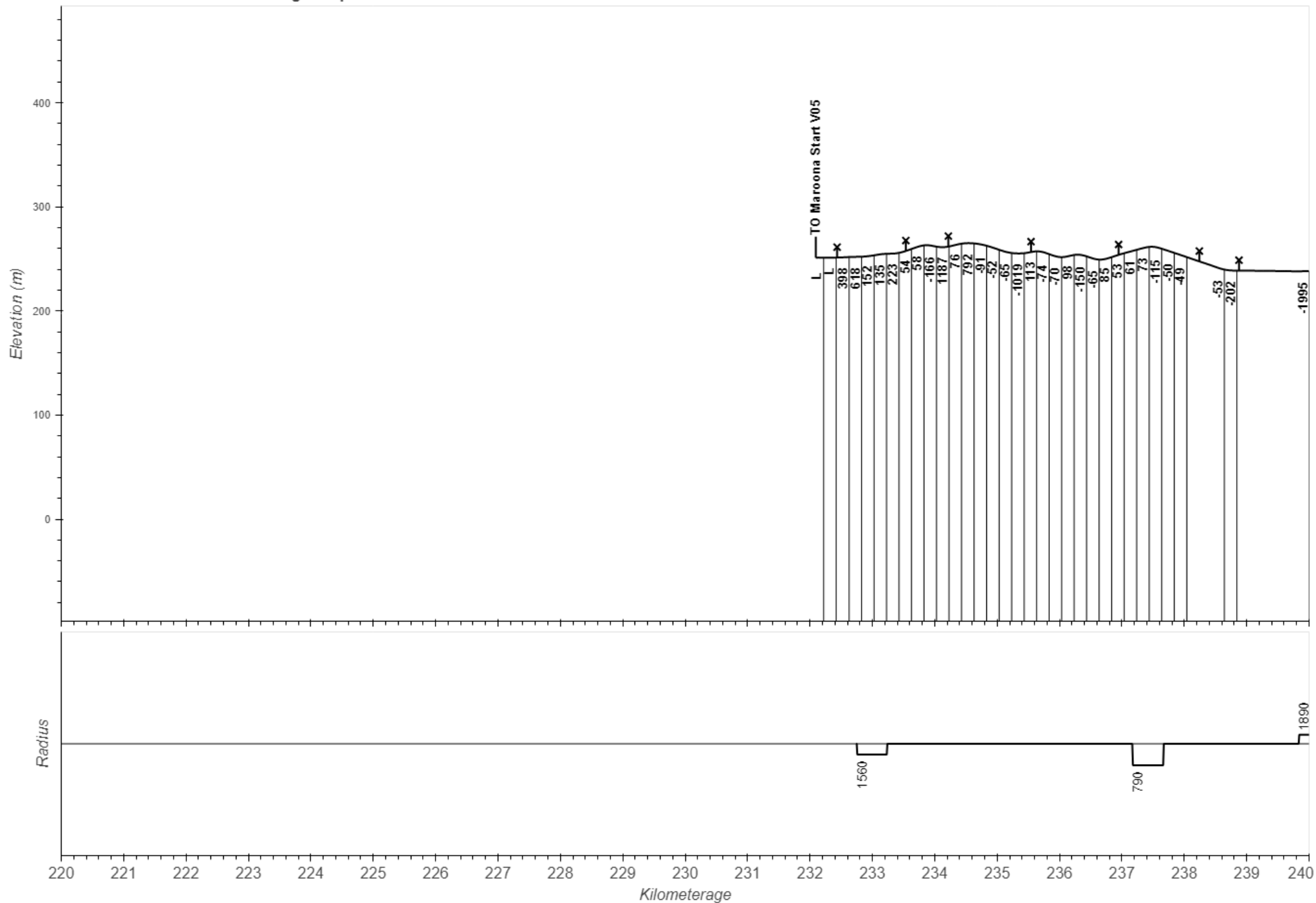
Right Curve

Left Curve

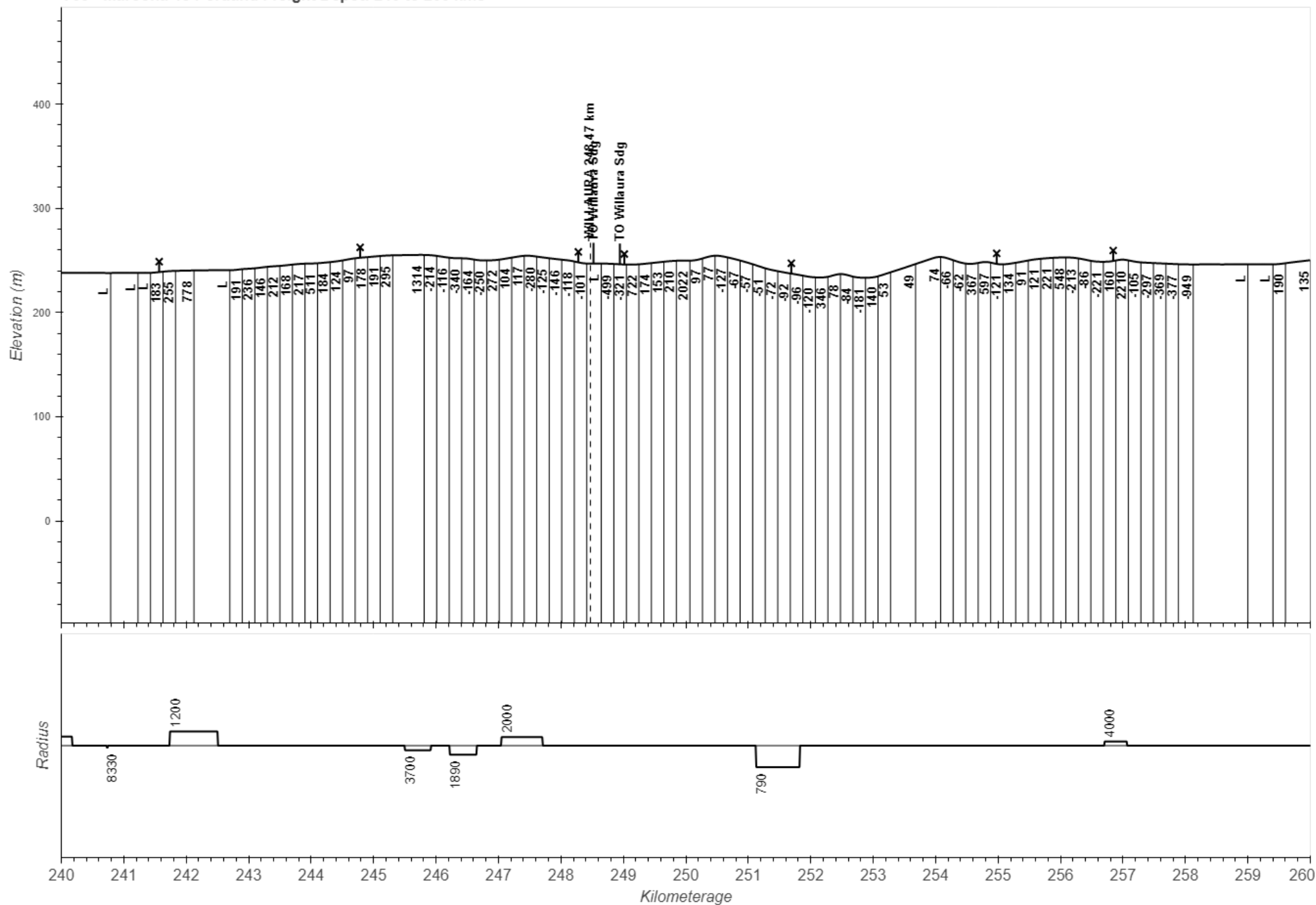


Turnout	Turnouts are denoted by a small vertical lines along the elevation profile, with a TO (turnout) prefix. A suffix of XO means that there is a crossover. These turnouts are toe of blades locations, and therefore should not be used to estimate standing length.
Tunnel	Tunnels are denoted by a step above the elevation profile. The length of the step is the length of the tunnel. The above label is the name of the tunnel.
Elevation Profile	The elevation line shows the elevation against distance. This elevation is relative to sea level, and the vertical range across an entire basecode is fixed and will not change from diagram to diagram.
Level Crossing	Level crossings are denoted by a cross on top of a vertical line above the elevation profile. This marker indicates the centre of the level crossing. Level crossings can be subject to change, so these are provided as a guide only.
Level Gradient	A level gradient is a gradient with an absolute value greater or equal to 1:2500. Level gradients are denoted by an “L”.
Route Name with Start and End Point Platform and Location	<p>This is the title of the diagram. The route name is the start and finish point of the basecode. The stand and end points represent the distance covered by the diagram below.</p> <p>Platforms are denoted by a dashed vertical line leading up to a vertical label. Within the label, the platform name is indicated, followed by the kilometerage at platform centre. Both active and inactive platforms are included.</p>
Gradient	The gradient is shown as a “1 in” number. A positive gradient indicates an increase in elevation and a negative gradient gradient indicates a decrease in direction. The gradients are calculated between the solid vertical lines which are approximate vertical intersection points.
Radius in Metres	The curvature is represented by the radius, in metres. The curvature line is represented as the “inverse radius”. This means that tighter curves have more deviation from the centreline. The radius labels are not inverted however, and show the radius in metres. Compound curves are stepped. The radius values are rounded depending on magnitude. < 250 is rounded to the nearest 2m, < 350 to the nearest 5m and >500 to the nearest 10m.
Centreline	The gray line on the radius plot incidicates a radius of 0. This line is included to increase the readability of curvature values.
Right Curve	Curves above the centreline indicate a right hand direction.
Left Curve	Curves below the centreline indicate a left hand direction.

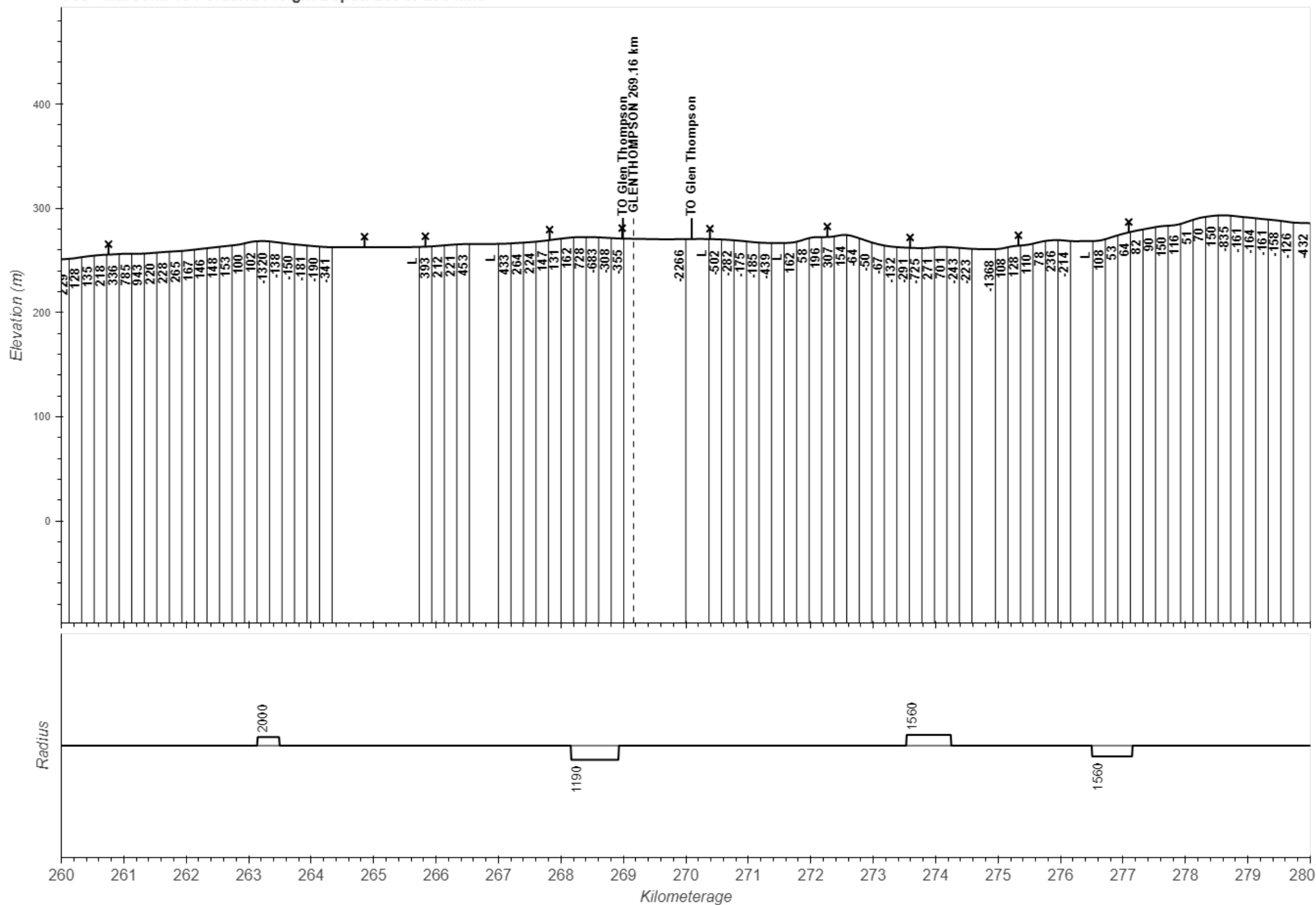
V05 - Maroona To Portland Freight Depot: 220 to 240 kms



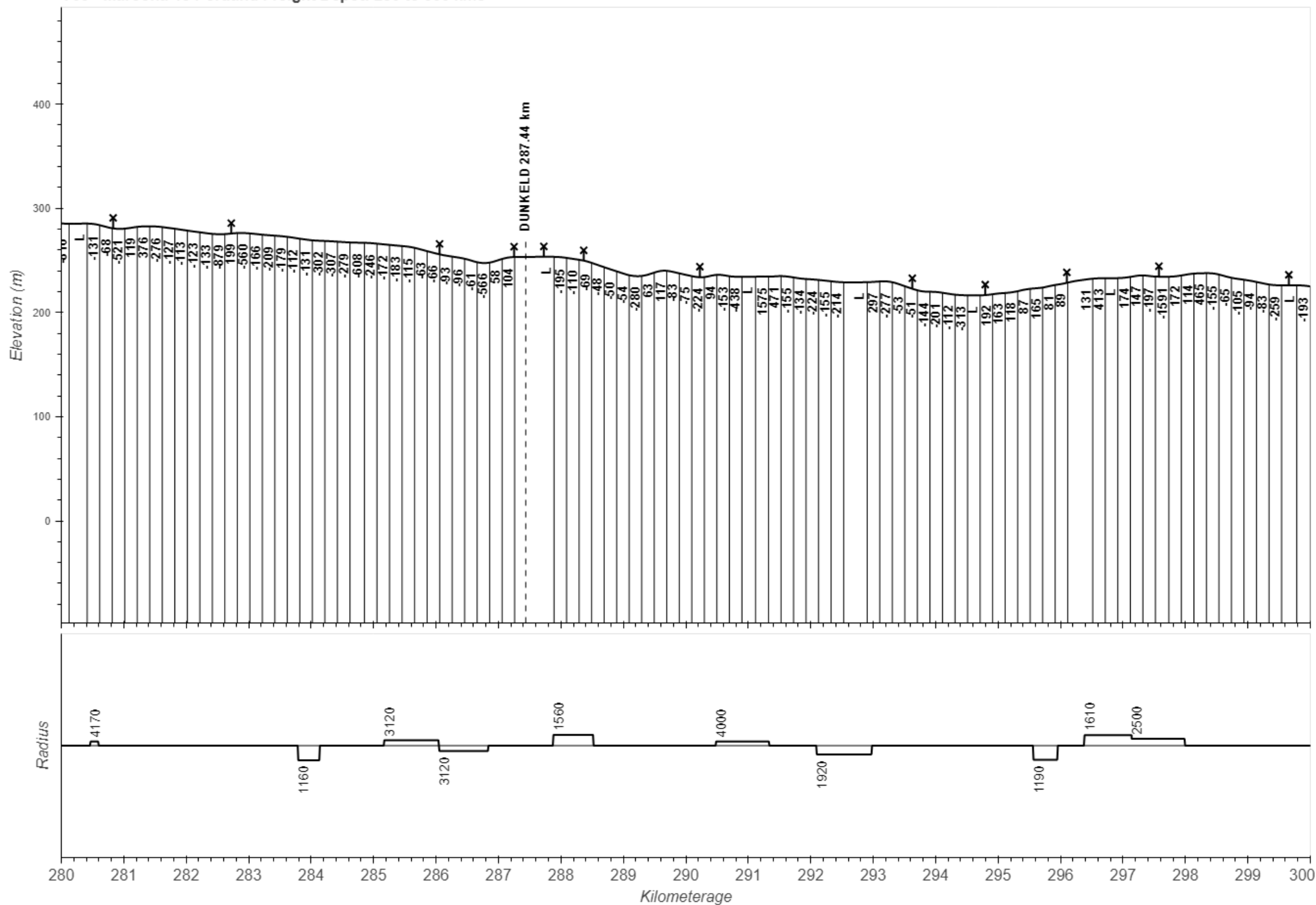
V05 - Maroona To Portland Freight Depot: 240 to 260 kms



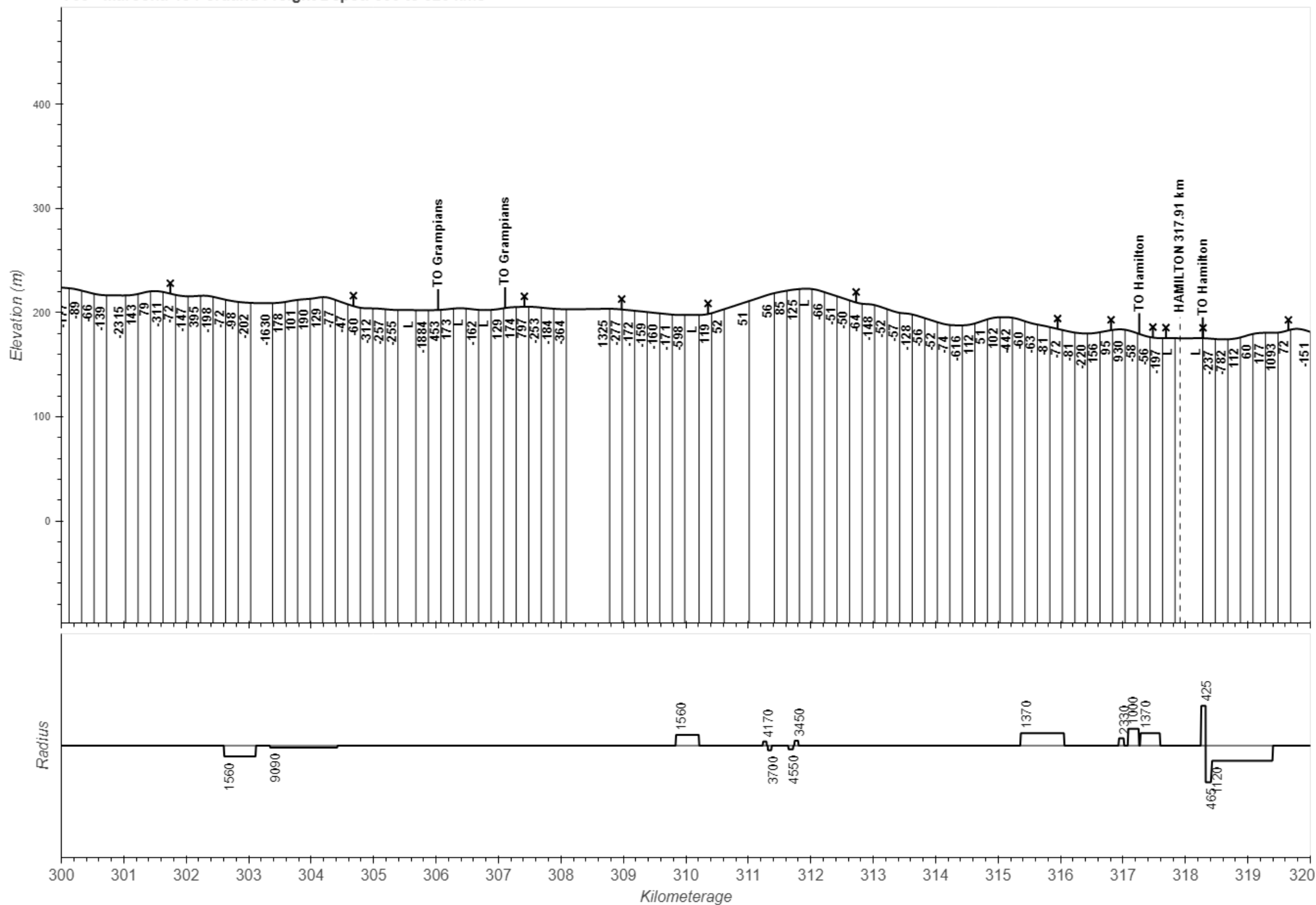
V05 - Maroona To Portland Freight Depot: 260 to 280 kms



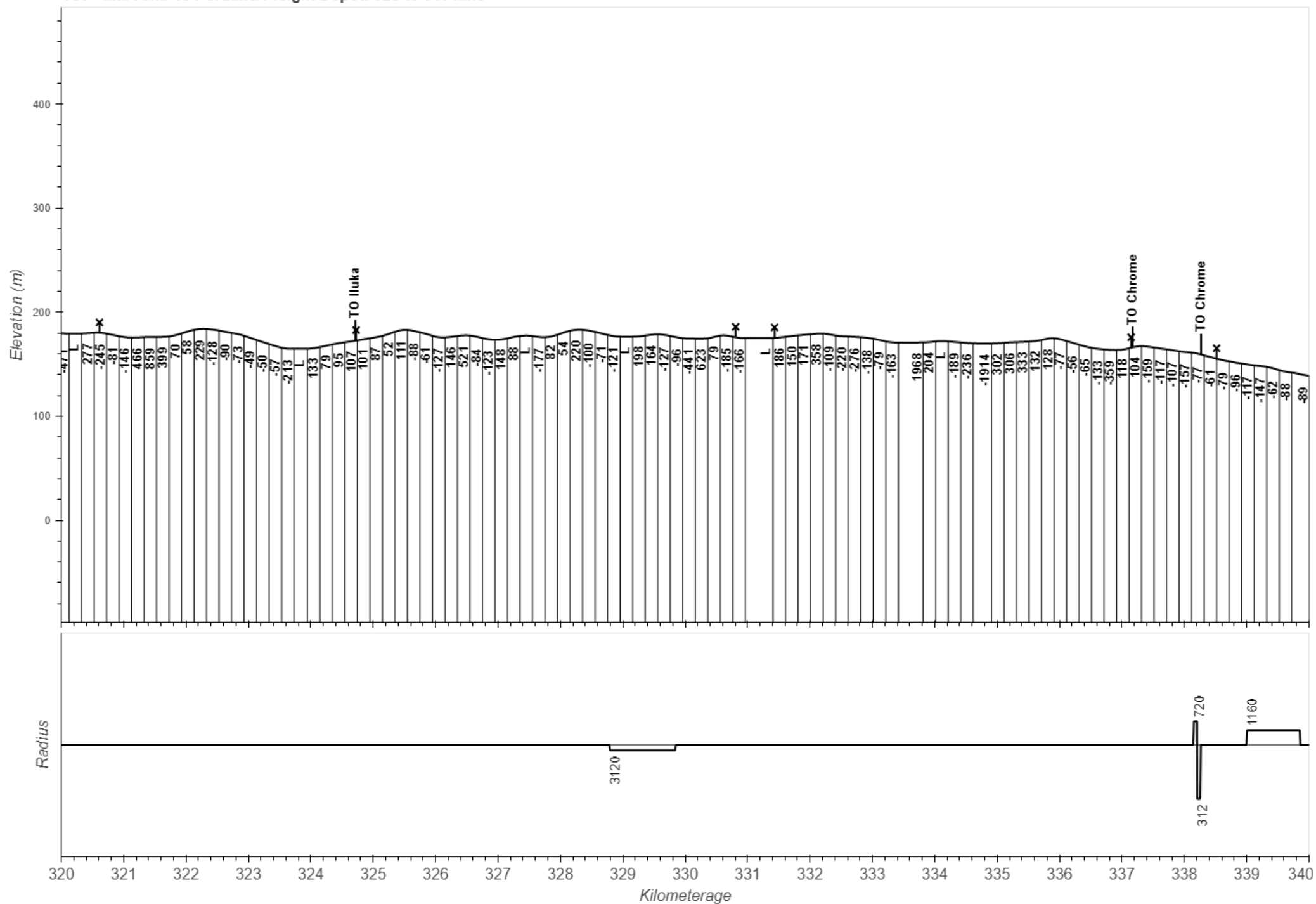
V05 - Maroona To Portland Freight Depot: 280 to 300 kms



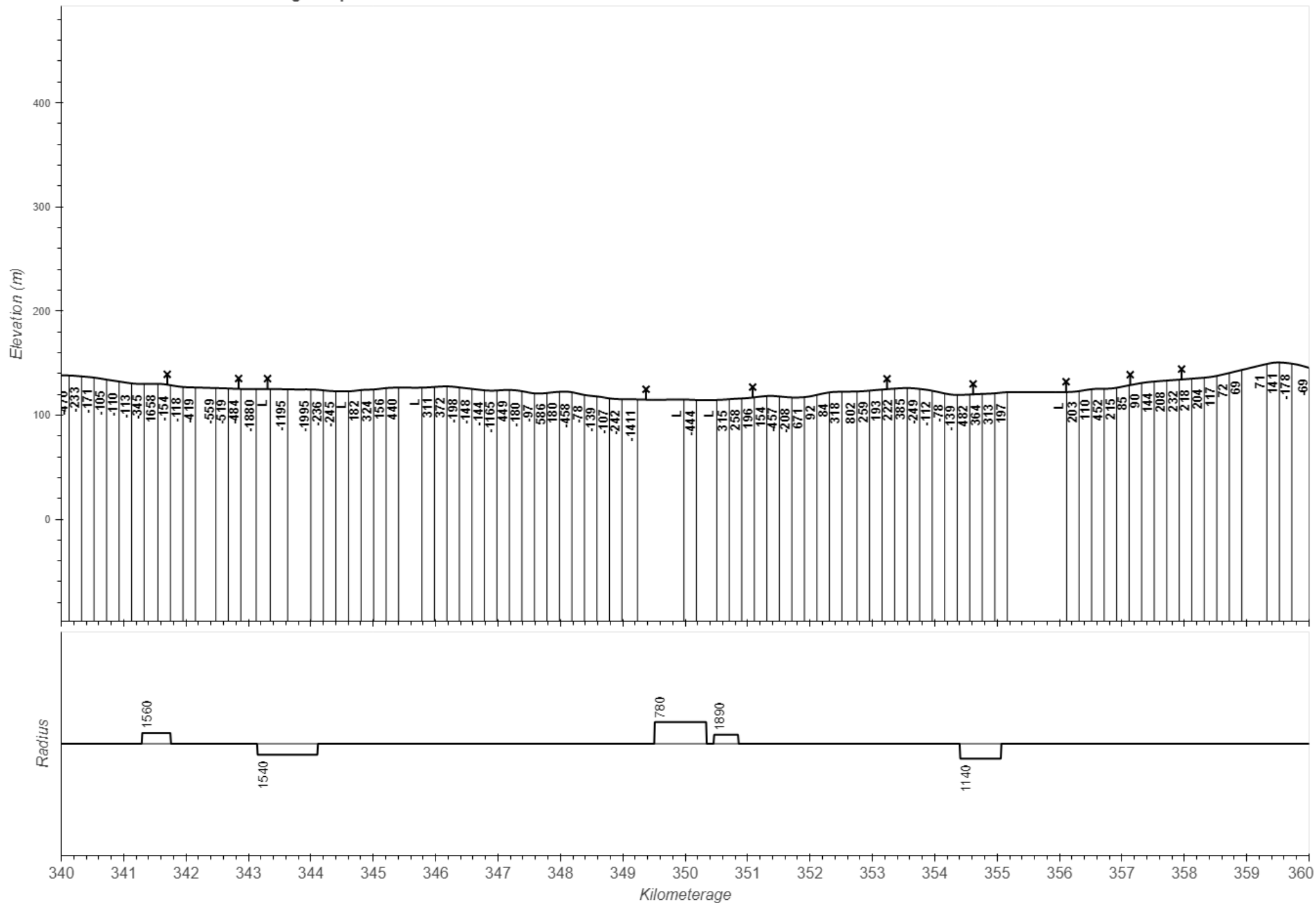
V05 - Maroona To Portland Freight Depot: 300 to 320 kms



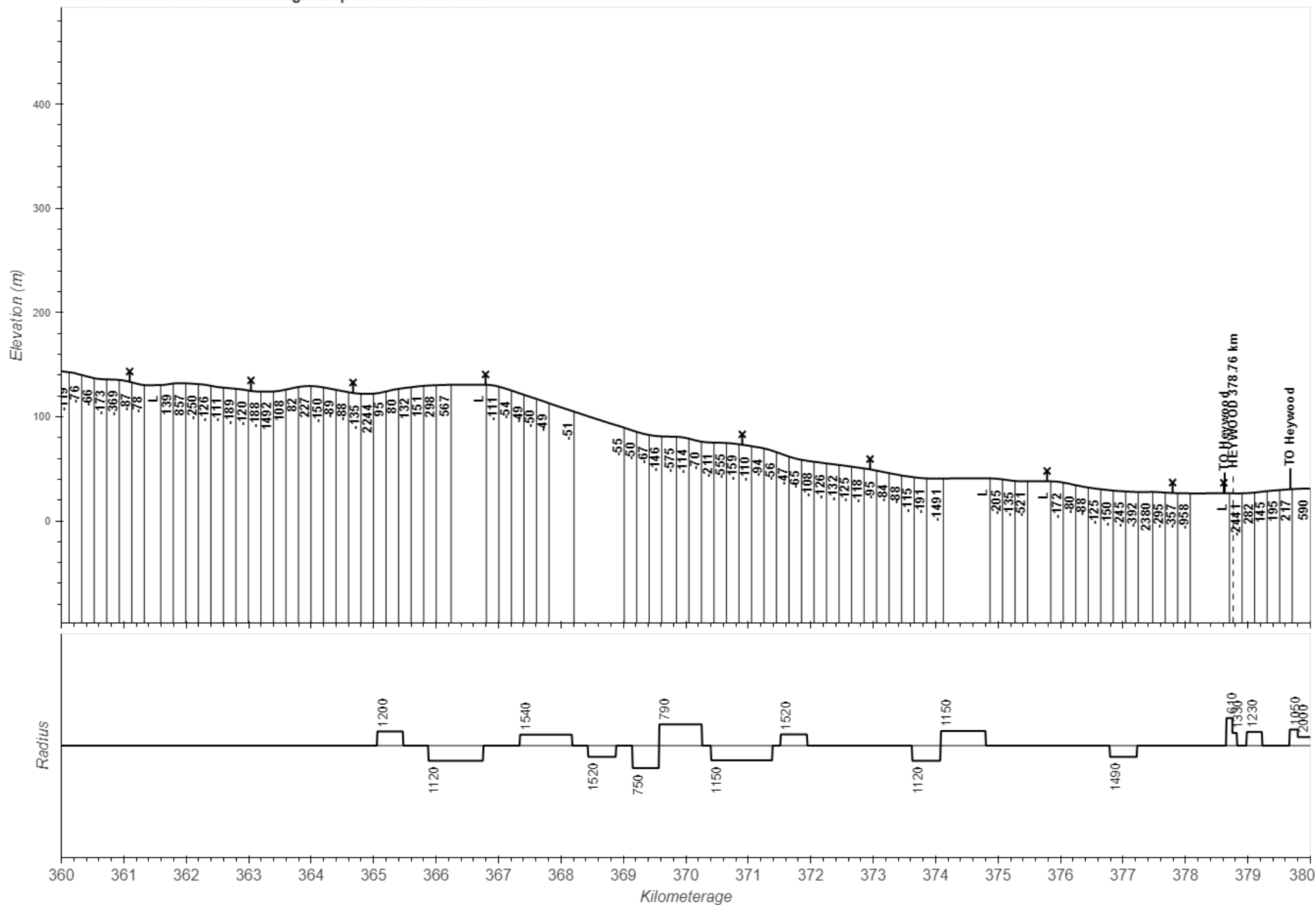
V05 - Maroona To Portland Freight Depot: 320 to 340 kms



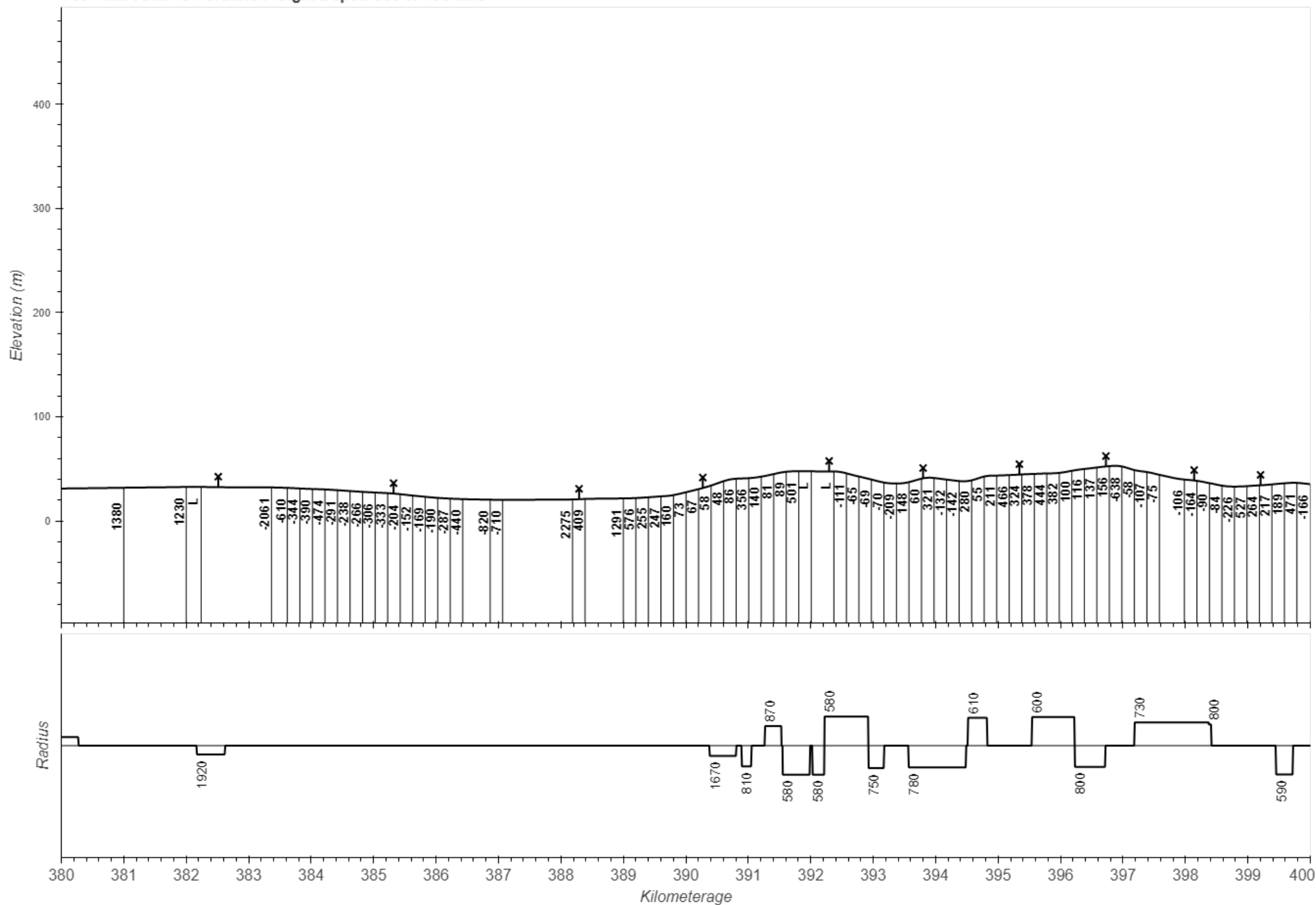
V05 - Maroona To Portland Freight Depot: 340 to 360 kms



V05 - Maroona To Portland Freight Depot: 360 to 380 kms



V05 - Maroona To Portland Freight Depot: 380 to 400 kms



V05 - Maroona To Portland Freight Depot: 400 to 420 kms

