SCHULICH School of Engineering

UNIVERSITY OF CALGARY

DEPARTMENT OF GEOMATICS ENGINEERING

ENGO 641 - Design and Implementation of Geospatial Information Systems

Assignment 5-part b

COURSE INSTRUCTOR: **DR. EMMANUEL STEFANAKIS**

DATE OF SUBMISSION: **2023 – 11 – 20**

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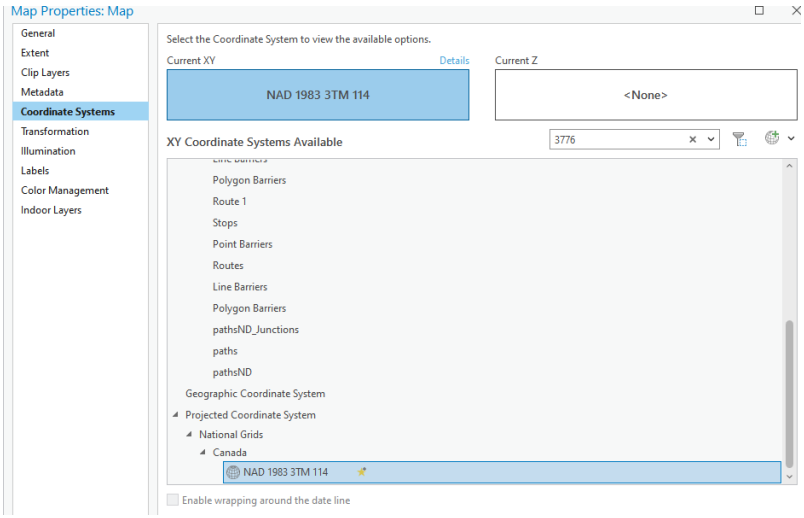
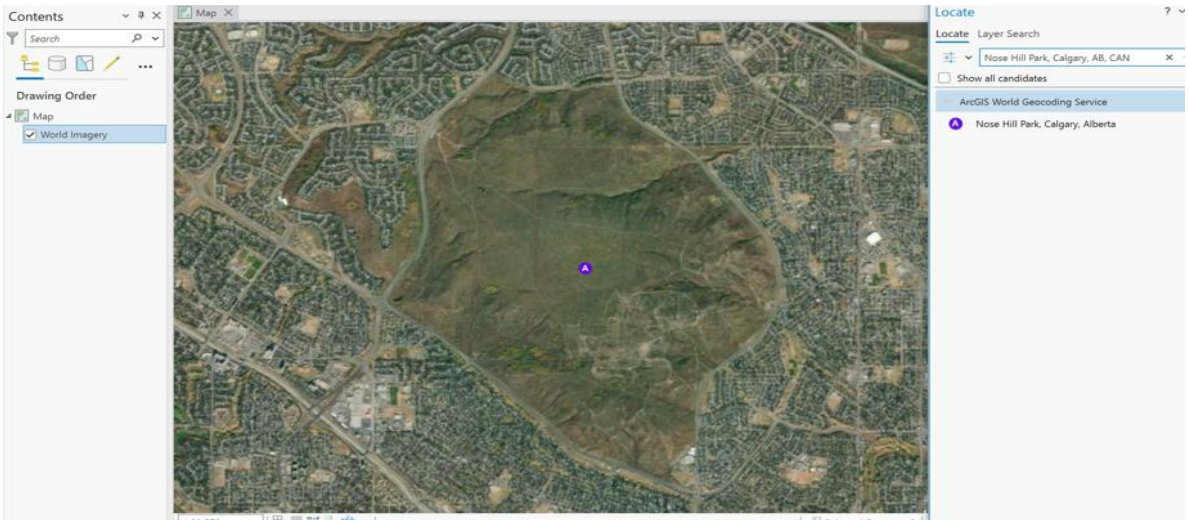
GIS Assignment 5: Building and Analysing Pedestrian Networks in Nose Hill Park

This GIS assignment involves the creation of a pedestrian network in ArcGIS Pro and conducting fundamental network analyses. Specifically designed for Nose Hill Park in NW Calgary, a simplified pedestrian network will be developed. Subsequently, we have leveraged this network to determine optimal routes between user-selected locations, emphasizing practical applications of spatial analysis within a real-world context.

At first, the coordinate system is set to **NAD 1983 3TM 114.** A Screenshot giving information regarding this is below:



The Nose Hill Park is shown in the map below as screenshot:

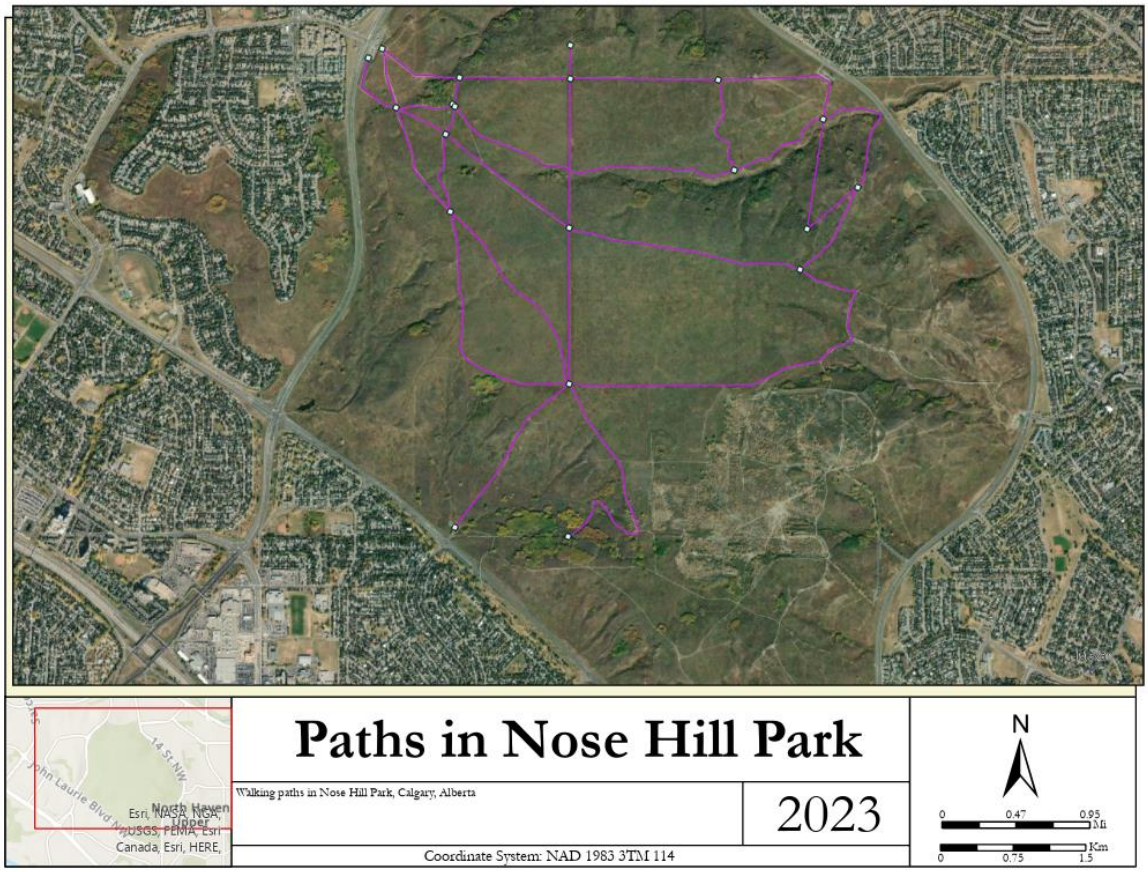


5.b: <u>A slide deck with the map layouts/screenshots produced in steps 8 and 9:</u>

The report showing the details of step 8 and 9 is below:

<u>Step 8. Creating a Map Layout:</u>

- Designed a map layout including network edges and junctions.



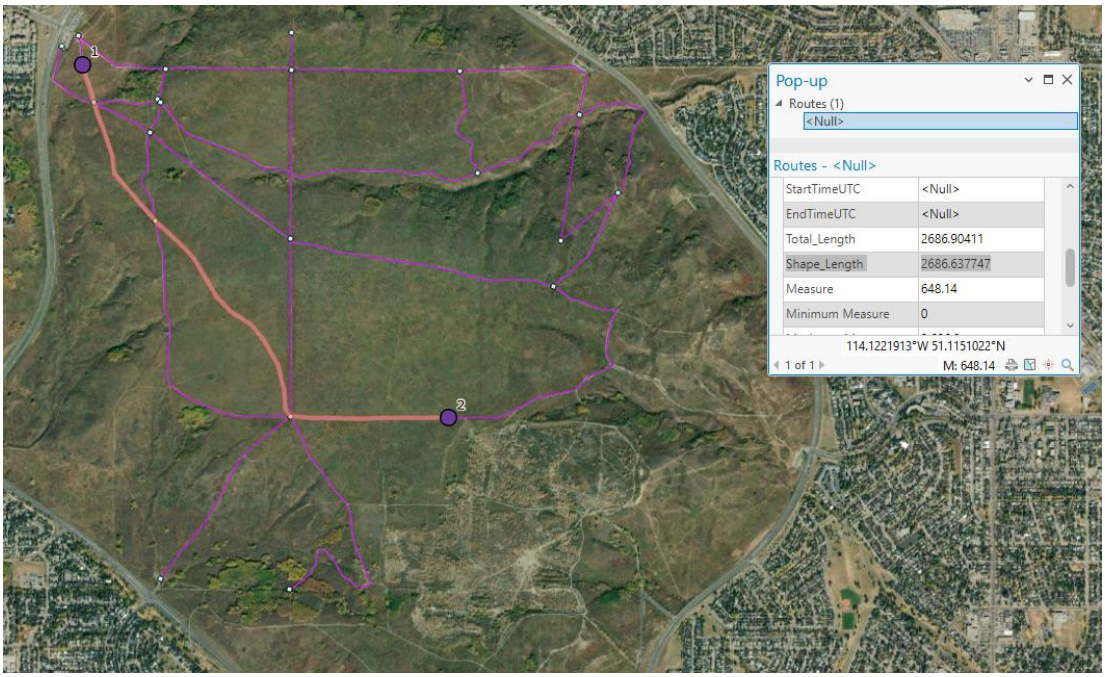
<u>Step 9. Finding Shortest Routes:</u>

- Utilized the network to find the shortest routes between point pairs in Nose Hill Park.

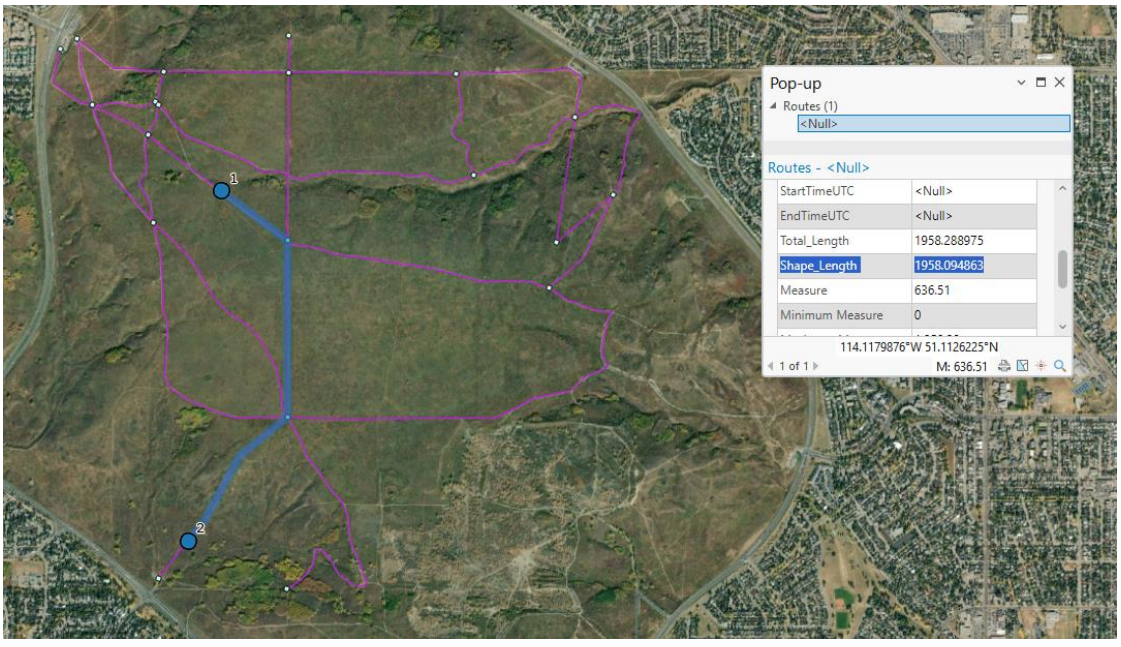
- Provided map layouts or screenshots depicting the routes and reported the lengths of three selected paths.

Screenshots of the routes with the lengths are below:

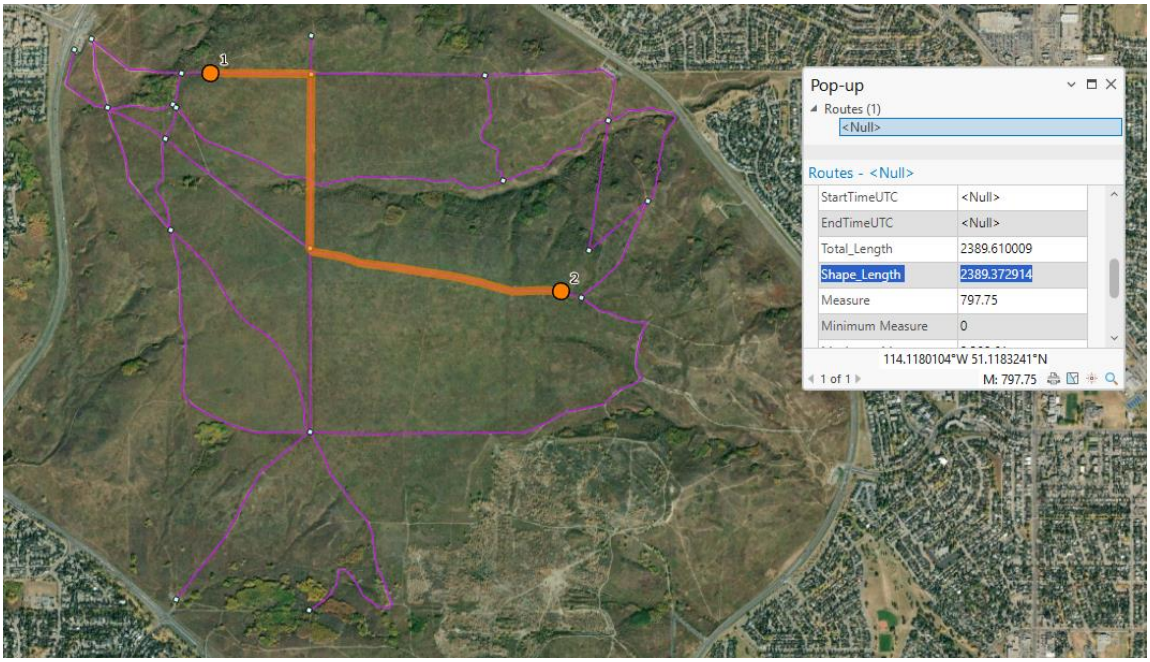
Route 1:



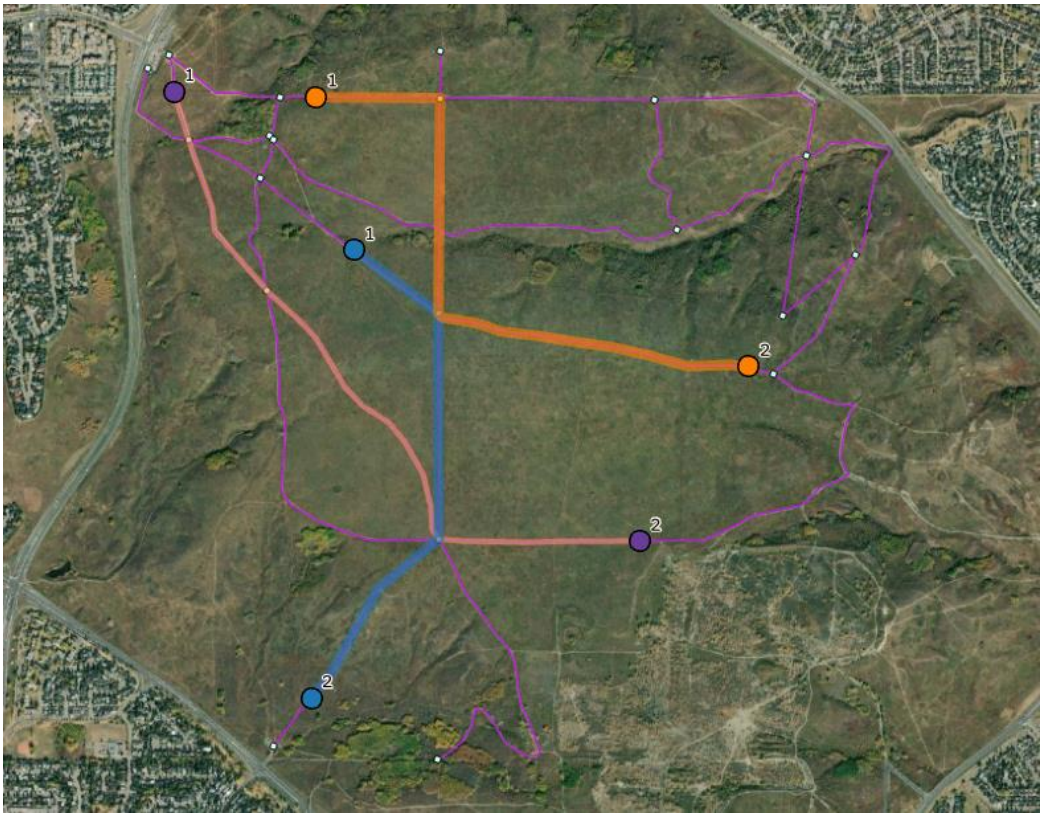
Route 2:



Route 3:



All 3 routes in the map:



All 3 routes with map layout is below: