Nayanika Sukumar
A01262823

GIST 7109: Term Project
Annacis Island Regional Development Project - Report

For the Annacis Island Regional Development Project, I created two PDFs with different map schemes. In total, this project took me around 12 - 15 hours, this is mostly due to digitizing and reference attachment issues.

Some of the issues I faced happened early on in the project while attempting to attach the sheet surround to the design file. My first move was attaching the design model to the surround space, here my two models were not lining up and I had no clue why this was the case. I eventually switched the models around, attached the surround model to the design and that sorted my initial problem out. In the digitizing stage I ran into a couple of problems, the biggest one being the map getting pixelated as one zooms in. While placing houses, it got hard to figure out exactly where the houses were placed and the features started overlapping with each other. In addition, some of the line work got confusing. This was mainly for the roads and the railways. Areas where the freeway merged with other roads, or roads went below one other got hard to keep track off. Features at time would block other features, such as text blocking structures and roads. In a couple of areas, assumptions had to be made as to where the features actually were. Similarly, assumptions also had to be made when using the TIFF file since the GEOTIFF didn't line up exactly with the TIFF. Since the boundary was delineated for the project, many discrete features like roads and power lines crossed this boundary. To create visual hierarchy and flow in this map, I decided to continue some of the features beyond the set boundary until it ended at the border of the map. These elements were - roads, railway lines, municipality boundaries, powerlines and greenspaces. I personally felt that the map looked abrupt and unfinished when, for example, roads were cut because they left the boundary at a certain area, but rejoined the map in another. I only digitized the features that originated from inside the boundary and not features that merged later on beyond the boundary.

The issue I faced while modelling layers, elements and symbology was mostly based on priority. Since this map had no focus, I felt that many of the elements were competing for map space and I was unsure of what to prioritize and what to use to obtain visual hierarchy. At times it was hard to decide one feature over another - for example, is a railroad more important than a minor road and is a freeway more important that a railroad? I found it quite challenging at times to find balance in the map, and spent a lot of time trying different symbology settings. I was able to achieve a decent map balance through a combination of different line weights, colours and transparency. In addition, some of the priority settings were hard to balance. I felt that in some areas of the map, the shoreline over the land looked good, but when it ran next to a railway or a green space, I felt that visually it could have looked better. I was unsure if it was possible to change the priority of a certain element in a feature class.

When creating layers, I created 7 different 'groupings' to help optimize the workflow - UTM, Hydro, Tra, Land, Stru, Utl, Sur. Each of these groupings then had individual 'sub-groups' - e.g: Land_Annacis, Land_Surround. For the original map, I used a polychromatic scheme. Since the focus of the map was on Annacis, I decided to make the island a different colour than the rest of the surround to hopefully draw the map user's attention. In addition, to create a smooth hierarchy I decided to choose a custom colour scheme rather than using MicroStation's defaults. To help aid with the visual hierarchy, I used transparency for the green space as it is not an important aspect of the map, but adds to the overall aesthetic of the map. This helps not distract from other features and elements and makes the surround look more like a well integrated 'basemap'. I also dropped the

transparency for the UTM grid, however this did not make it into the PDF because it was messing with the resolution and print quality. For roads, I used an analogous colour scheme (red, orange and yellow) to highlight the different road types - the bigger the road, the darker the colour. I tried to follow the basic cartographic conventions for this map such as, italics and blue text for river names. For the structures, I used the same colour scheme to highlight the similarity, but each 'sub-set' (e.g building, house, tanks) had a distinct shape. Railway lines, dikes and houses were all created using the cell feature.

The Pen table on the other hand followed a monochromatic scheme, mainly following the different hues of the shade green. Some of the features are flipped compared to the original map. In this map, instead of creating the road hierarchy with colours, I used the same colour, but changed the line weights. In addition, to bring attention to the structures I changed the colour scheme to be much lighter, while changing the colour of the river to a dark green-grey. I did not include Annacis as a different colour in this map to create more of a map that 'flows' well.

The scale bar and the north arrow were created on different design models and then attached to the main design model. For the north arrow, I used similar dimensions as lab-4, but this was slightly too big for my design model and I had to scale it down to a 1:3 ratio, which worked pretty well. For the scale bar, I created a 0 - 1000m bar with each division tick being 100m.

In the future, to make better maps, I would make slight modifications to the approach. During this project, I felt that multiple elements were competing for map space. At times, I found it difficult to choose which aspect to prioritize and which to lower the transparency of. To help solve this, I could potentially create multiple maps each which highlights a certain/ different feature. This would help the map user focus on the features they want or use the one that caters to their needs. For example, if the Transportation Department is looking to update their road network, then the key feature of the map would be different road types (freeway, arterial highway, residential road, etc) and would be symbolized as such - e.g thicker line weights or graduated colour schemes. Elements like railways might fade into the background or not be digitized for this particular map. Another example could be green spaces rejuvenation - where green spaces in the map would be highlighted more and features pertaining to this project would be added (e.g hiking trails/ walking paths).