Peer Review

Instructions: The project author receiving the review is responsible for managing this document and making sure all peer reviewers are received and of high quality. All sections should be filled out. The project author is also responsible for filling out how they will respond to the review in each section.

Once complete, upload PDF to canvas final project submission.

Detailed Steps:

1. Prepare project
2. Request reviews
3. Receive written reviews
4. Meet to discuss review and document specific edits to project
5. Make project edits

Project Author: Greg Kohler
Project Title: Comparing Service Area of Points Before and After I-94 Removal
Link to Document for Review: https://github.com/greg-kohler/GIS5571/tree/main/Final

Continue below for Peer Reviews

Peer Review 1

Name: Sebastian Brauer
Email: braue189@umn.edu
Directions: Fill out rubric and answer prompts. Project author fill out last section.

Category	Description	Points Possible	Score
Structural Elements	All elements of a lab report are included **(2 points each)**: Title, Notice: Dr. Bryan Runck, Author, Project Repository, Date, Abstract, Problem Statement, Input Data w/ tables, Methods w/ Data, Flow Diagrams, Results, Results Verification, Discussion and Conclusion, References in common format, Self-score	28	28
Clarity of Content	Each element above is executed at a professional level so that someone can understand the goal, data, methods, results, and their validity and implications in a 5 minute reading at a cursory-level, and in a 30 minute meeting at a deep level **(12 points)**. There is a clear connection from data to results to discussion and conclusion **(12 points)**.	24	24
Reproducibility	Results are completely reproducible by someone with basic GIS training. There is no ambiguity in data flow or rationale for data operations. Every step is documented and justified.	28	28
Verification	Results are correct in that they have been verified in comparison to some standard. The standard is clearly stated **(10 points)**, the method of comparison is clearly stated **(5 points)**, and the result of verification is clearly stated **(5 points)**.	20	20
		100	100

Describe 3-5 things that are done well in the project.

The goal of the project is pretty clear which is nice. It is a sensitivity analysis on travel time over a corridor and seeing how a potential future network dataset may be different from an existing network dataset. I also like how this analysis uses data that can be found in other locations to allow for potential extrapolation to other areas.

Describe 3-5 areas you could see room for improvement. Be specific and provide suggestions for how these areas could be improved.

This freeway is very peculiar because it connects two major metropolitan downtowns that are less than 10 miles apart. I don't think there is another freeway in the country that does that. The example image shows one point, the text mentions other points will be used as well. I would say just be clear as to why those points are chosen along the network. The other thing is that network datasets are directional in nature, do you plan on using both to and from information? Lastly, there is a temporal element with directional traffic, is there a way to make different costs based on the time of day and direction of travel? Additionally, the intro text mentioned converting

this area into a boulevard but the example images show a network dataset where the highway is completely gone. Are various options (boulevard, full removal, local street) going to be considered or simply one alternative option from the existing condition? Overall, a great project excited to see the outcome just may need to refine some additional details.

PROJECT AUTHOR ONLY:

What specific actions will you take to respond to this review?

I am planning on using several more points that will be randomly sampled by ArcGIS Pro. I will likely want to randomly sample points within a certain distance from 94. I had not considered using both to and from service area analyses, but that is something that would not take much extra work and would provide a much more interesting analysis. I will definitely include results for both to and from trips. For time of day, I had considered it, but since I am making a network that does not exist in the real world, it would be hard to predict traffic trends. For the various option of what will happen with 94, I am considering building a new boulevard that would exist in place of I-94. My only concern is that each road feature has a large amount of attributes, and it might be difficult to make my new hypothetical boulevard work with the network dataset. This is something that will be dependent on how much time I have.

Peer Review 2

Name: Laure Briol
Email: Briol009@umn.edu

Directions: Fill out rubric and answer prompts. Project author fill out last section.

Category	Description	Points Possible	Score
Structural Elements	All elements of a lab report are included **(2 points each)**: Title, Notice: Dr. Bryan Runck, Author, Project Repository, Date, Abstract, Problem Statement, Input Data w/ tables, Methods w/ Data, Flow Diagrams, Results, Results Verification, Discussion and Conclusion, References in common format, Self-score	28	28
Clarity of Content	Each element above is executed at a professional level so that someone can understand the goal, data, methods, results, and their validity and implications in a 5 minute reading at a cursory-level, and in a 30 minute meeting at a deep level **(12 points)**. There is a clear connection from data to results to discussion and conclusion **(12 points)**.	24	24
Reproducibility	Results are completely reproducible by someone with basic GIS training. There is no ambiguity in data flow or rationale for data operations. Every step is documented and justified.	28	28
Verification	Results are correct in that they have been verified in comparison to some standard. The standard is clearly stated **(10 points)**, the method of comparison is clearly stated **(5 points)**, and the result of verification is clearly stated **(5 points)**.	20	20
		100	100

Describe 3-5 things that are done well in the project.

The problem statement was influenced by existing literature, which shows the real world implications this lab has! The methods section being informed by the literature is again smart and is exactly how these projects should be– something of use when entering the workforce. The visuals are amazing and this project is so practical in every sense of the word!

Describe 3-5 areas you could see room for improvement. Be specific and provide suggestions for how these areas could be improved.

You should have a clear reason why the points were chosen for a given network. Is there anything your input data is not accounting for lane information and other types of road network data that would enhance the project. Would traffic and other conditions affect the variables created or have those been accounted for? Will you validate the results beyond visuals?

PROJECT AUTHOR ONLY:

What specific actions will you take to respond to this review?

For this draft, I just chose a point near my house for visual purposes. I will be including a random sample of points and their service areas into the final version. This dataset is right from the Met Council and has everything needed to build the network. However, I could work on adjusting the travel attributes, as right now I have kept the default values for how long it takes to turn left, straight through, or turn right at a stop light. For traffic, this would be a difficult thing to show without real world data, as the dataset I am using is a hypothetical. I will validate my results beyond visuals, I plan on comparing the area of the service area from the multiple points to calculate the average change in service area. To verify my network is working as planned, I will compare my network dataset to the ESRI network.

Peer Review 3

Name: Yaxuan Zhang
Email: zhan6322@umn.edu

Directions: Fill out rubric and answer prompts. Project author fill out last section.

Category	Description	Points Possible	Score
Structural Elements	All elements of a lab report are included **(2 points each)**: Title, Notice: Dr. Bryan Runck, Author, Project Repository, Date, Abstract, Problem Statement, Input Data w/ tables, Methods w/ Data, Flow Diagrams, Results, Results Verification, Discussion and Conclusion, References in common format, Self-score	28	28
Clarity of Content	Each element above is executed at a professional level so that someone can understand the goal, data, methods, results, and their validity and implications in a 5 minute reading at a cursory-level, and in a 30 minute meeting at a deep level **(12 points)**. There is a clear connection from data to results to discussion and conclusion **(12 points)**.	24	24
Reproducibility	Results are completely reproducible by someone with basic GIS training. There is no ambiguity in data flow or rationale for data operations. Every step is documented and justified.	28	28
Verification	Results are correct in that they have been verified in comparison to some standard. The standard is clearly stated **(10 points)**, the method of comparison is clearly stated **(5 points)**, and the result of verification is clearly stated **(5 points)**.	20	18
		100	98

Describe 3-5 things that are done well in the project.

1) The project problem statement is clear. The author tries to evaluate the impact of I-94 freeway removal regarding the travel time and convenience.
2) The preliminary results are very clear, with two maps for service area comparison.
3) The data pipeline is clear to me.

Describe 3-5 areas you could see room for improvement. Be specific and provide suggestions for how these areas could be improved.

1) It would be interesting if the author explore the potential opportunities or resources it may become inaccessible due to the I-94 freeway removal.
2) It is obvious that the service area will shrink as the I-94 freeway is removed. I am interested in why the government would want to remove it. It would be more beneficial to compare both positive and negative impact to reach the final conclusion whether it is worthy to remove I-94 freeway
3) The preliminary result only shows the service areas derived from a point. I am wondering how would you like to present your final output.

PROJECT AUTHOR ONLY:

What specific actions will you take to respond to this review?
The first suggestion gave me an idea that it might be smart to put major trip generators on the maps to give viewers more context. This could include the airport, the Mall of America, various colleges, and large employers. Additionally, it might be a good idea for me to include more background information about the removal of I-94 into my final version. Air pollution, equity, and quality of life are all important factors that are driving a public demand for the removal of the large freeway. This might be helpful to talk about in my problem statement. My final output will likely be several maps generated from several different points to represent the differences in service area. I might have the before and after 94 removal maps overlaid on each other to reduce the amount of figures in the final version.