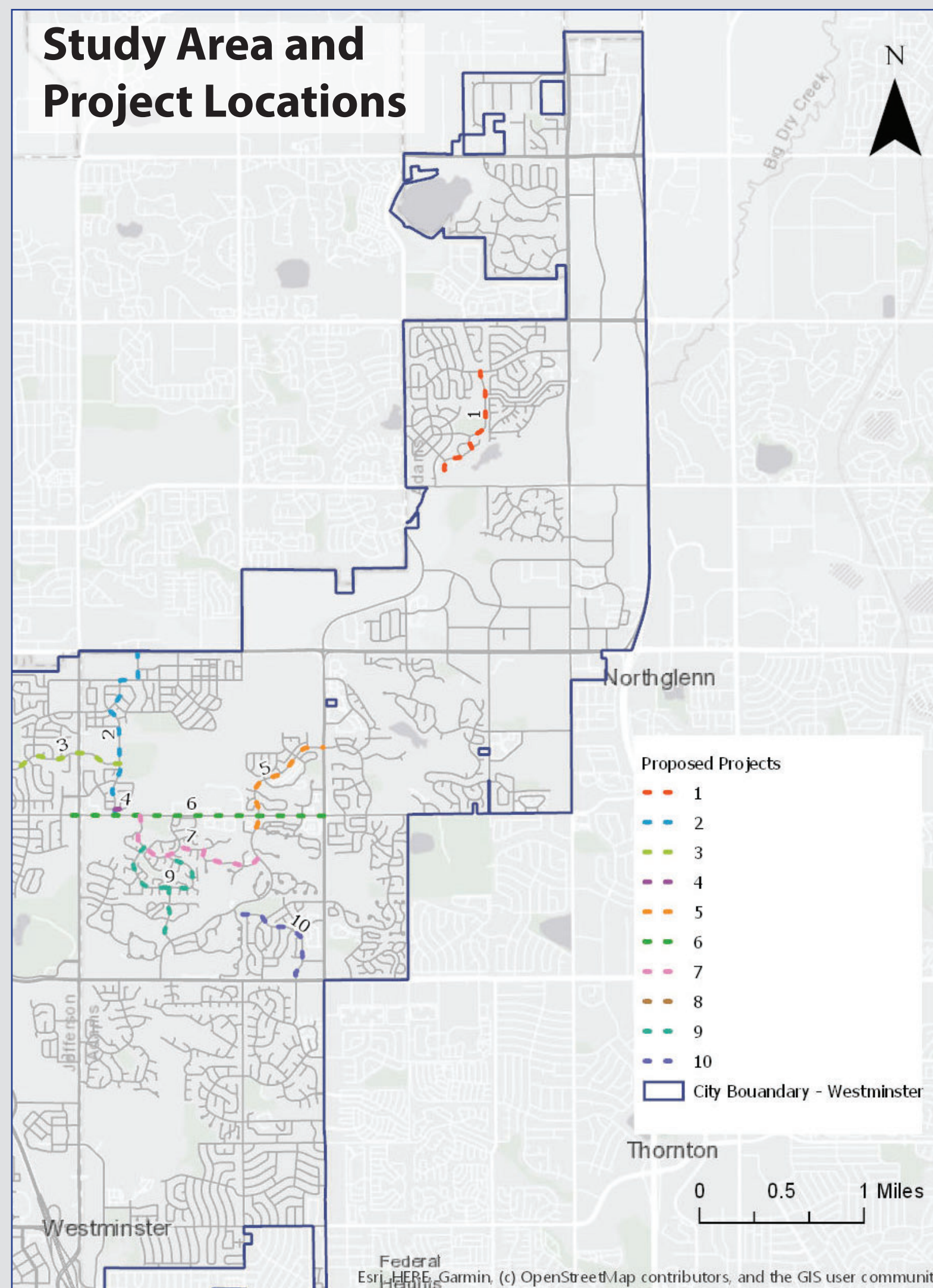


Creating a Model for Active Transportation Project Prioritization in Westminster, Colorado

Introduction

The purpose of this Capstone project is to create a model for prioritizing transportation projects in Westminster using the ActiveTrans Priority tool.



ActiveTrans Priority Tool

The APT is a step-by-step methodology for prioritizing bicycle and pedestrian projects. This can be done as two separate processes or together as part of a complete streets project. This tool is flexible and allows the user to customize factors and variables within the tool to reflect the goals and values of the user. A programmed spreadsheet for calculating score and rank of projects is available to the user as well as an accompanying guidebook.

Methodology

Determine which data to use for tool and for GIS analysis.



Use GIS software to analyze the data as it relates to the projects.

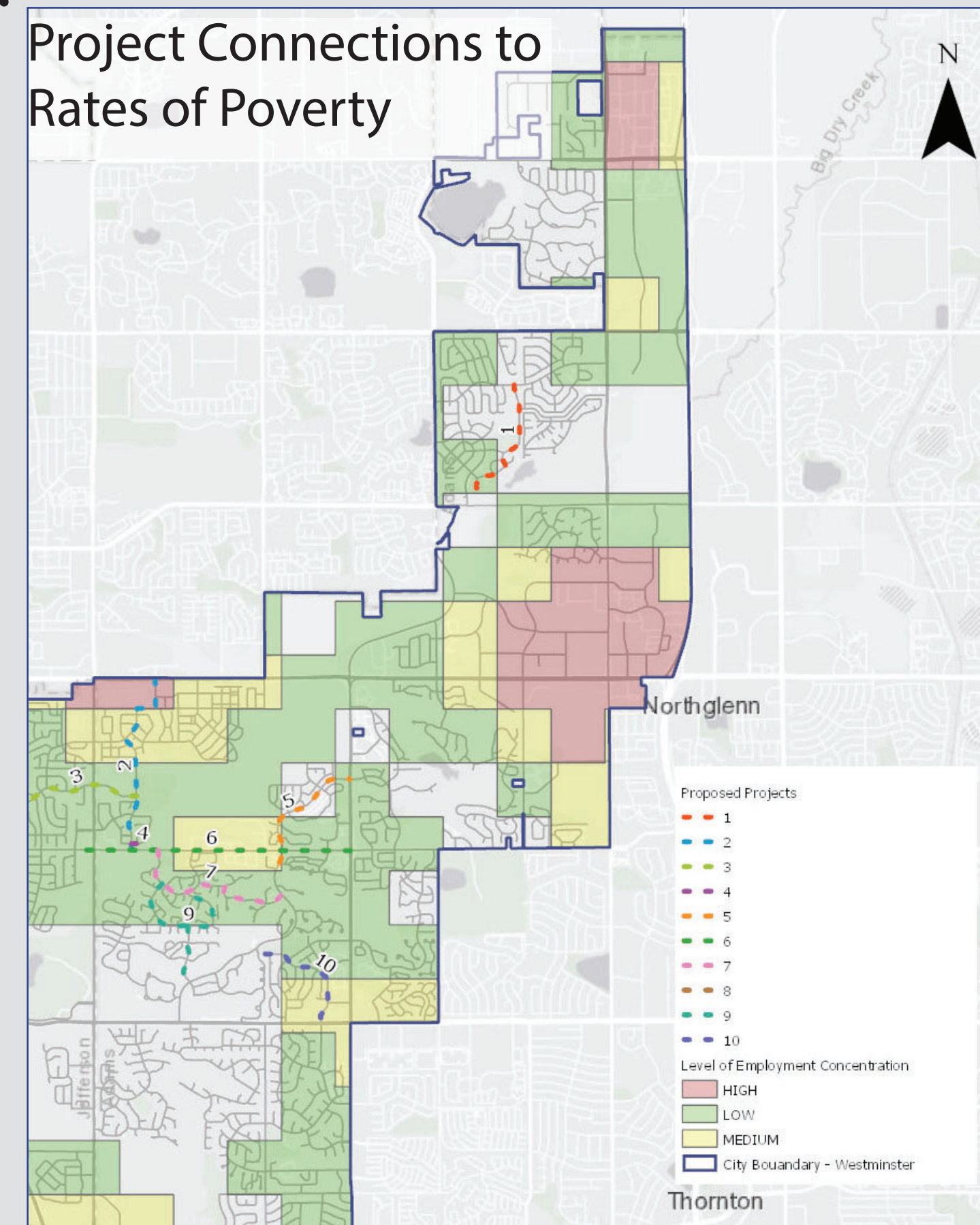


Complete the APT programmed spreadsheet to determine project scores and rank.

Spatial Analysis

Six maps were created for datasets that were spatially analyzed. These were: proximity to schools, connection to existing bicycle infrastructure, connection to levels of employment density, connection to rates of poverty, connection to rates of vehicle accessibility, and bicycle involved crashes that resulted in an injury.

Example:



Conclusion

APT Ranking Results

Project #	Location	Prioritization Score	Prioritization Rank
6	112th Ave Bike Lanes	175.0	1
3	115th Ave Neighborhood Greenway	160.0	2
10	107th Ave Bike Lanes	145.0	3
8	Harlan St/108th Ave Bikeway Improvements	140.0	4
2	Westfield Neighborhood Greenway	138.3	5
1	Weather Stone Neighborhood Greenway	130.0	6
9	Cotton Creek Dr Bike Lanes	88.3	7
4	Vrain St to Big Dry Creek Trail Connection	88.3	8
5	Stratford Lakes / King St Bike Lanes	81.7	9
7	Sheridan Green Bikeway Improvements	78.3	10

Project number 6, which scored highest, is a fairly long roadway segment that connects to two major roads, Federal Boulevard and Sheridan Boulevard. It also had the highest number of bike involved crashes of any of the projects. Its size and location resulted in high scores in many of the factors. Project number 7, which scored lowest, is located in a primarily residential area, and does not connect to any major roads. It did not have any recorded bike crashes along it.

Recommended Next Steps

1. Review the proposed factors and corresponding variables
2. Identify who needs to be involved in determining variables and weights; which departments, how many representatives; community members, stakeholders, etc.
3. Identify the data needed and availability, how much work it would take to create it if needed
 - a. Build a database
4. Select projects to be ranked
 - a. Decide whether these projects should be scored against each other or separately if bicycle and pedestrian projects
5. Use GIS to determine spatial relationships between variables where necessary
6. Use APT to score projects based on outcomes of above steps using the selected factors and variables
7. Analyze ranking results and determine if multiple iterations are needed