Appendix E. Final Scoring Methodology and Maps

For the purposes of scoring, the draft network corridors were divided into segments of varying length, with an average corridor length of 5 miles with starting and ending points established based on logical termini or transitions in land use intensity. The analysis was conducted by creating a buffer around each corridor segment that captured a mile-wide swath. If, for example, a major destination fell within a corridor's buffer, that was presumed to be an asset of the corridor, and contributed to the corridor's overall score.

For purposes of evaluating the Regional Bicycle Transportation Network corridors, a one-mile width was selected for corridors outside of the highest density urban core of Minneapolis and Saint Paul and a width of a ½-mile was used for all corridors within the core cities.

The scoring criteria discussed below were developed based largely on best representation of Regional Destinations and factors that support existing and future demand for bicycle travel. The section below is an overview of each scoring category, the feature(s) evaluated and criteria for scoring.

Each corridor segment received a total category score based on the cumulative factor scores for that segment. The maximum number of points any corridor could score for each category is provided for reference. The relative percentage contribution to the overall cumulative corridors analysis score is also shown for each category.

Emphasis on Regional Destinations. A key function of the Network is connecting to regional destinations. As mentioned in Section 2 of this report, emphasis was placed on defining the purpose of the Regional Bicycle Transportation Network and on the determination of what constitutes a regional destination.

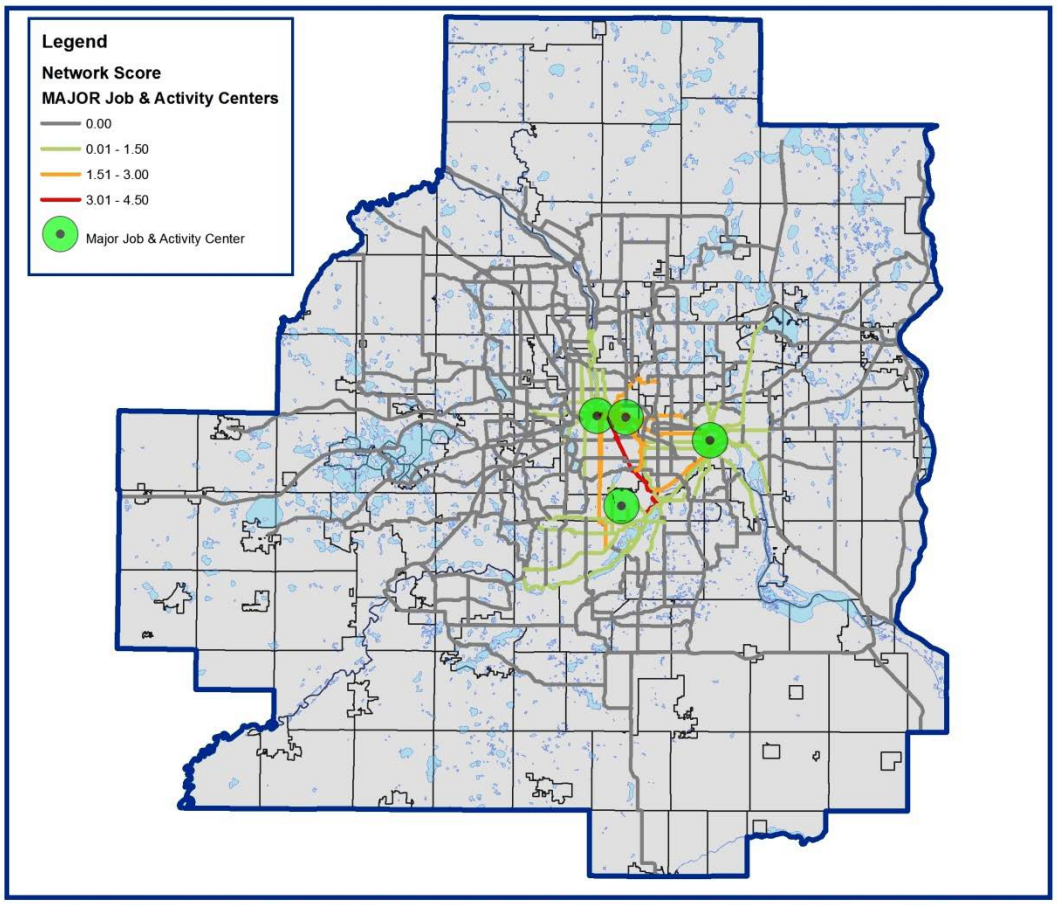
For purposes of the study, Regional Destinations were defined as being:

> *Regionally-recognized activity nodes or corridors where people work, shop, recreate, or are entertained. These may be further defined by one or more activity thresholds. Regional Destinations will typically be centers where multiple transportation modal options such as high-level transit service are provided.*

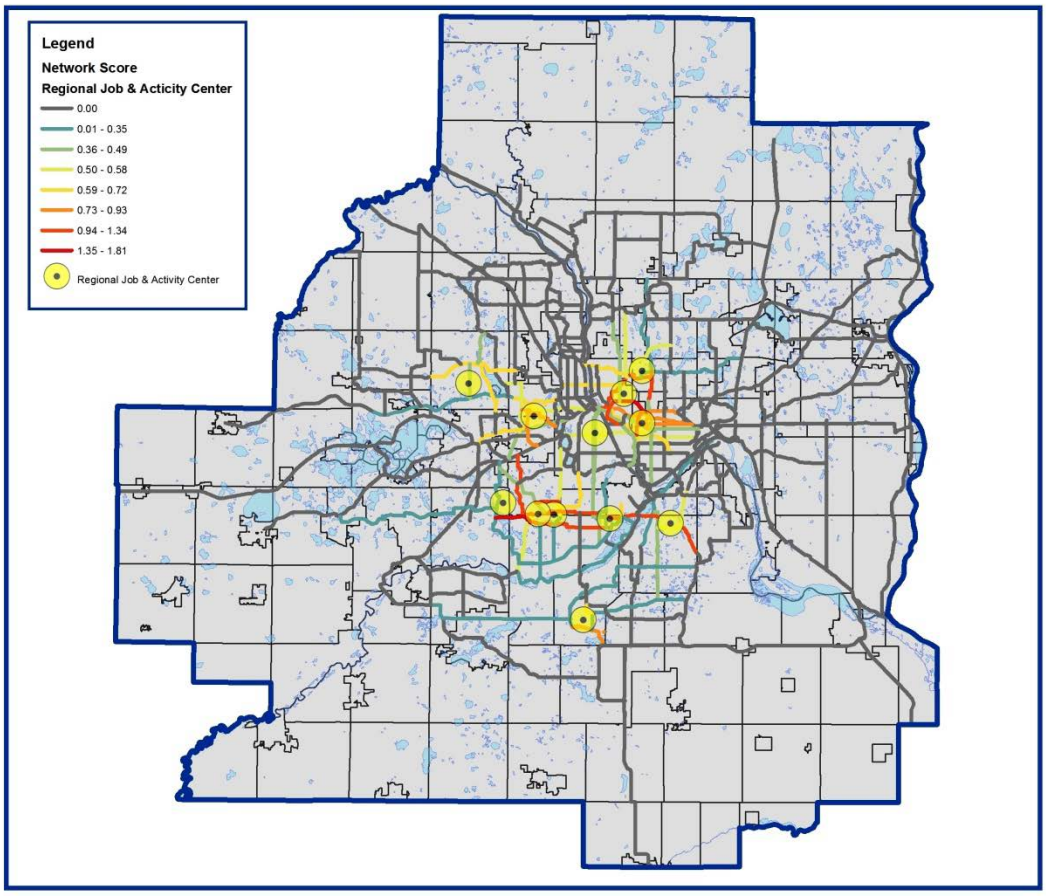
Regional Employment and Activity Centers. Metropolitan Council staff, as part of Thrive MSP 2040, analyzed employment data to identify job and activity clusters across the region. These centers constitute many of the primary destination points within the region, and will be important to serve by bicycle. The Job & Activity Centers dataset based on 2010 employment data from the Census, 2010 existing land uses, and the proprietary Longitudinal Employer-Household Dynamics (LEHD) data from The Center for Economic Studies. A threshold was set for any areas to be recognized as a center when the area holds at least 7,000 jobs at a density of at least 10 jobs per acre of developable land.

There are three intensities of job and activity centers included in the analysis: metropolitan, regional, and sub-regional which are described in the following three tables, respectively. The following is a detailed description of each scoring feature, including the total points possible and percent of the cumulative score (shown as percent contribution to cumulative corridor analysis score) for each category, and a map of the scoring results for the October 2013 draft network. (Note: the final proposed network includes a number of edits and changes made based on stakeholder feedback after the October workshops that are not reflected on these scoring maps.)

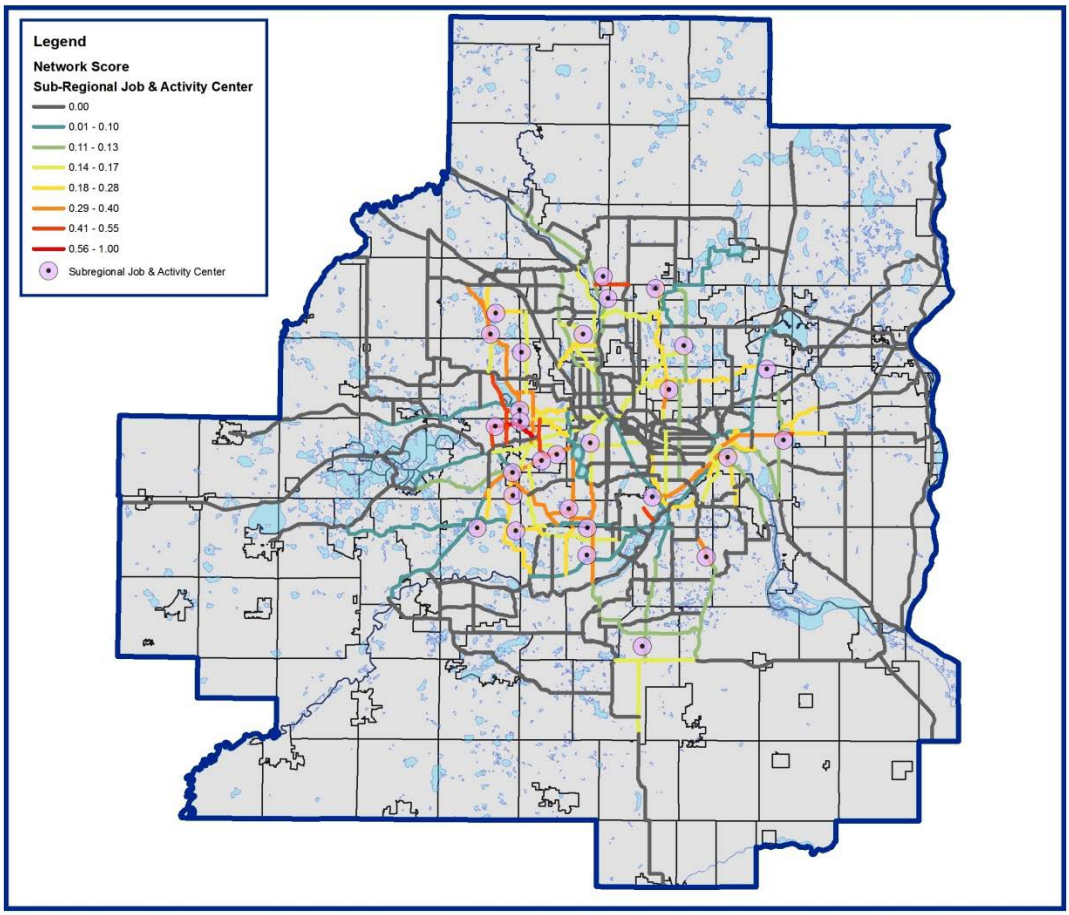
Category: **Metropolitan centers**	
Description: Metropolitan Centers held at least 50,000 jobs at the density of at least 50 jobs per acre. Four centers meet this threshold: downtown Minneapolis, downtown Saint Paul, the University of Minnesota-Twin Cities, and a district that includes the MSP Airport. 16.2% of regional jobs are contained in these areas. *Scoring:* Sum of major centers captured in the buffer, normalized so the maximum possible score was 4.5 points.	*possible score:* ***4.5*** *percent contribution to cumulative corridors analysis score:* ***29.0%***



Category: **Regional job and activity centers**	
Description: Regional Centers represent a subgroup of the Job & Activity Centers dataset. Regional job and activity centers are those that held 15,000 to 49,999 jobs at a density of 10 to 49 jobs per acre. Twelve centers fall in this category, including areas such as the professional center around I-494/France in Bloomington and Edina, or the diversified center around MN-280/I-94 in Saint Paul. 16.0% of regional jobs are contained in these areas. *Scoring:* Sum of regional centers captured in the buffer, normalized so the maximum possible score was 2 points.	*possible score:* **2.0** *percent contribution to cumulative corridors analysis score:* **12.9%**

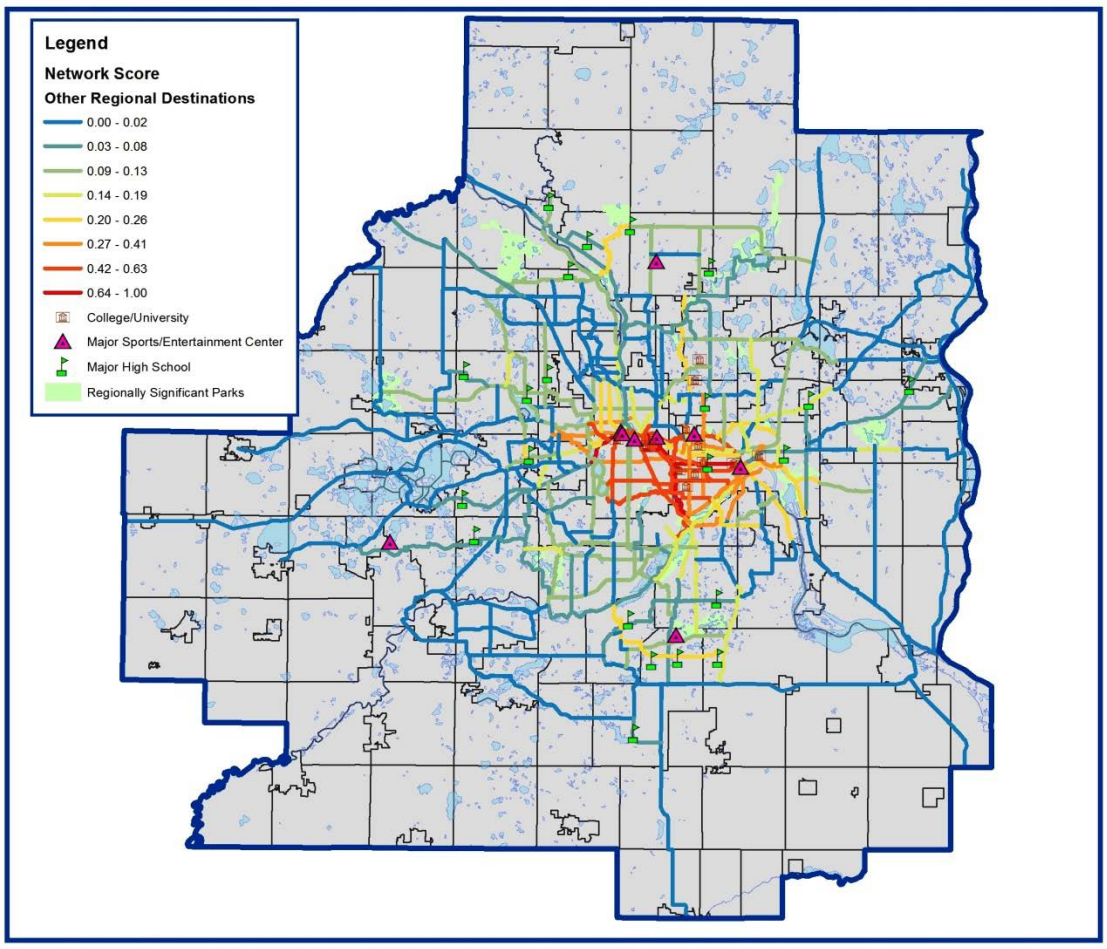


Category: **Sub-regional job and activity centers**	
Description: Sub-regional job and activity centers represent a subgroup of the Job & Activity Centers dataset. Sub-regional job and activity centers have between 7,000 and 14,999 jobs, at a density of 10 to 49 jobs per acre. 28 centers fall in this category, including areas such as Southdale Mall in Edina, or the West Side Flats area of Saint Paul. 17.5% of regional jobs are contained in these areas. *Scoring:* Sum of sub-regional centers captured in the buffer, normalized so the maximum possible score was 1point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***



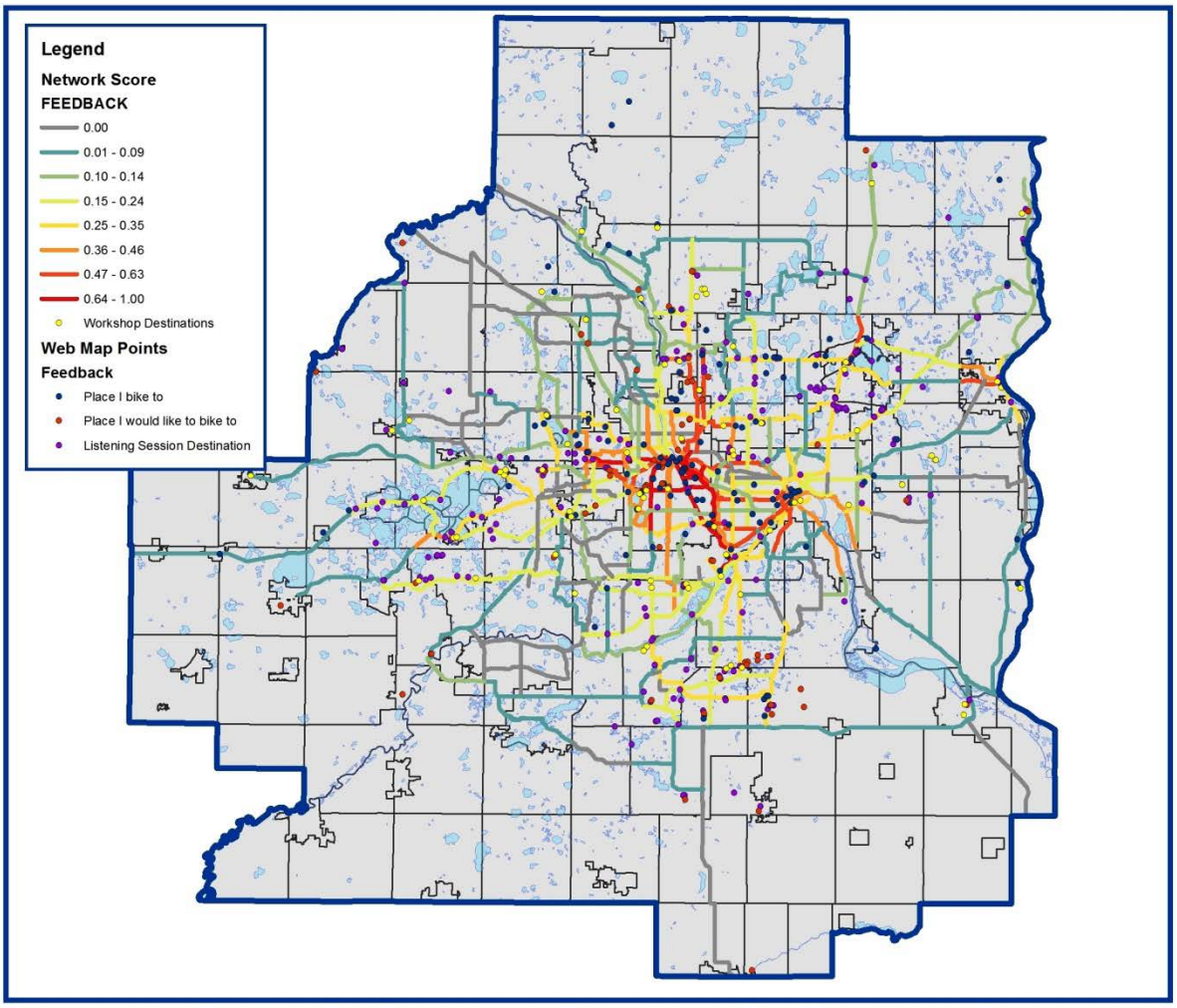
Other Destinations of Regional Significance. Because list of job and activity centers above was not all-inclusive, the study utilized several other categories of destinations that also factored into the analysis.

Category: **Selected other destinations**	
Description: • *Major sports and entertainment complexes* were identified, in particular those with a regional draw. This included Target Field, Target Center, TCF Stadium, Xcel Energy Center, the future Vikings stadium, the National Sports Center, the Minnesota Zoo, the University of Minnesota Arboretum, and the Minnesota State Fair. • *Major High Schools* in the region, which was defined as those with an enrollment in excess of 2,000 students. 22 such institutions were identified for analysis. • *Colleges and Universities* in the region, which includes those with an enrollment over 2,000. There are thirteen such institutions in Minneapolis Saint Paul. • *Major regional parks* in the region. The Metropolitan Council has designated a system of regional parks throughout Minneapolis Saint Paul, and among those parks, those that exceeded 400,000 visitors were identified. *Scoring:* The sum of these destinations that captured in the buffer, normalized so the maximum possible score was 1point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***


Legend
Network Score
Other Regional Destinations
0.00 - 0.02
0.03 - 0.08
0.09 - 0.13
0.14 - 0.19
0.20 - 0.26
0.27 - 0.41
0.42 - 0.63
0.64 - 1.00
College/University
Major Sports/Entertainment Center
Major High School
Regionally Significant Parks

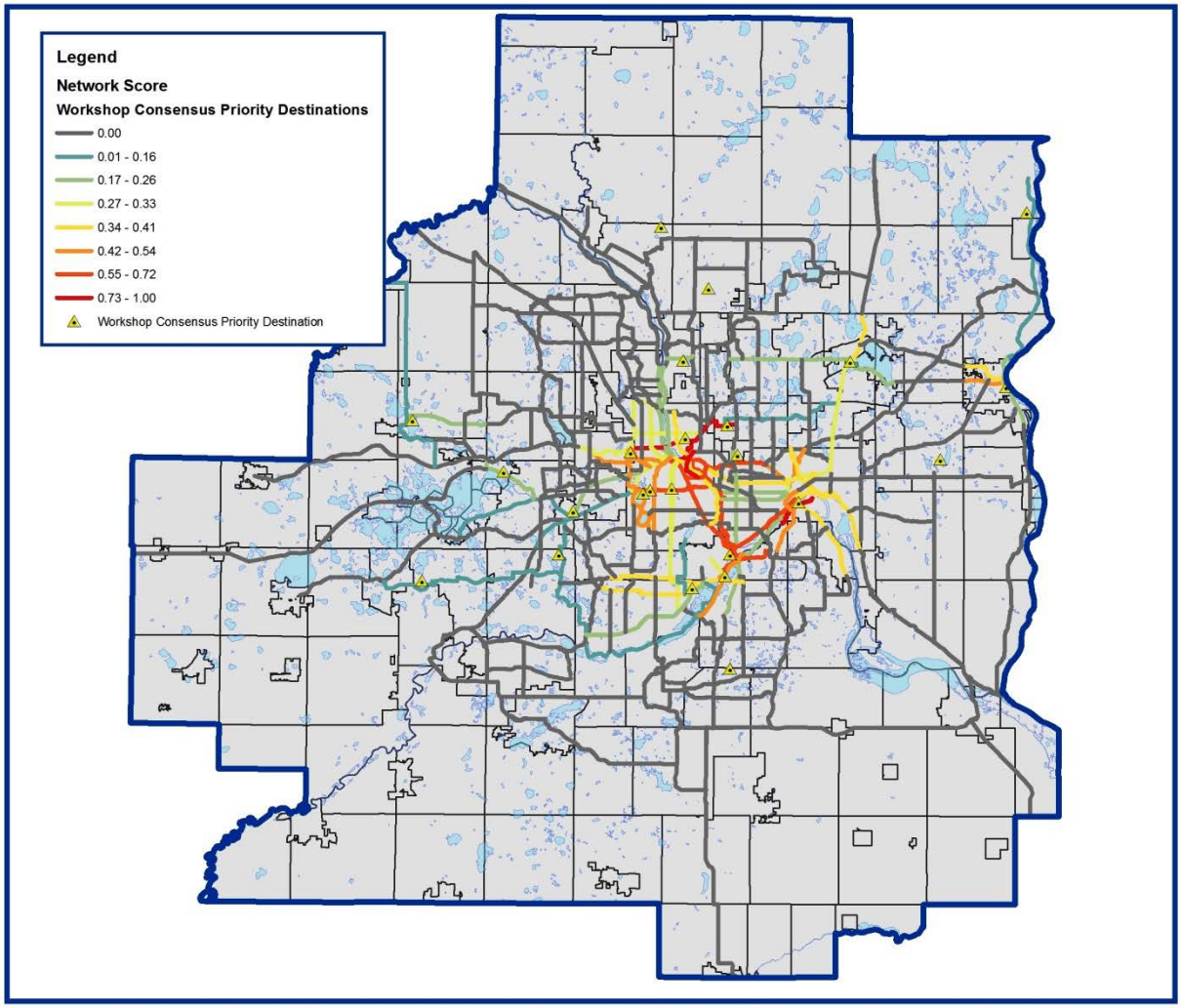
Public Input – Regional Destinations. Throughout the public outreach process input on important destinations was mapped using GIS. These data points represent individual and group input about important bicycling destinations that should be included in the analysis. They fall into three categories:

***Category:* Feedback destinations**	
Description: • *Destinations identified during listening sessions.* As described in Section 2, four listening sessions were held – one in each quadrant of the Twin Cities metro area. At each location, members of cycling clubs and residents with significant local knowledge worked in small groups and identified the major destinations that were important to serve in crafting a regional bicycle network. 76 such destinations were identified. • *Destinations identified through the interactive web-mapping tool (wikimap).* During the early phases of the project, a wikimap was made available online to collect and record feedback from the public at-large about key destinations they thought needed to be better represented in planning for bicycle infrastructure. In total, 203 destinations were identified on the wikimap. • *Destinations identified at project workshops.* On June 27th and July 11th, 2013, two public workshops were held. Workshop attendees were encouraged to identify destinations. In total, 74 unique destinations were identified in the project workshops. *Scoring:* The sum of these destinations that were captured in the buffer, normalized so the maximum possible score was 1 point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***


Legend
Network Score
FEEDBACK
0.00
0.01 - 0.09
0.10 - 0.14
0.15 - 0.24
0.25 - 0.35
0.36 - 0.46
0.47 - 0.63
0.64 - 1.00
Workshop Destinations
Web Map Points
Feedback
Place I bike to
Place I would like to bike to
Listening Session Destination

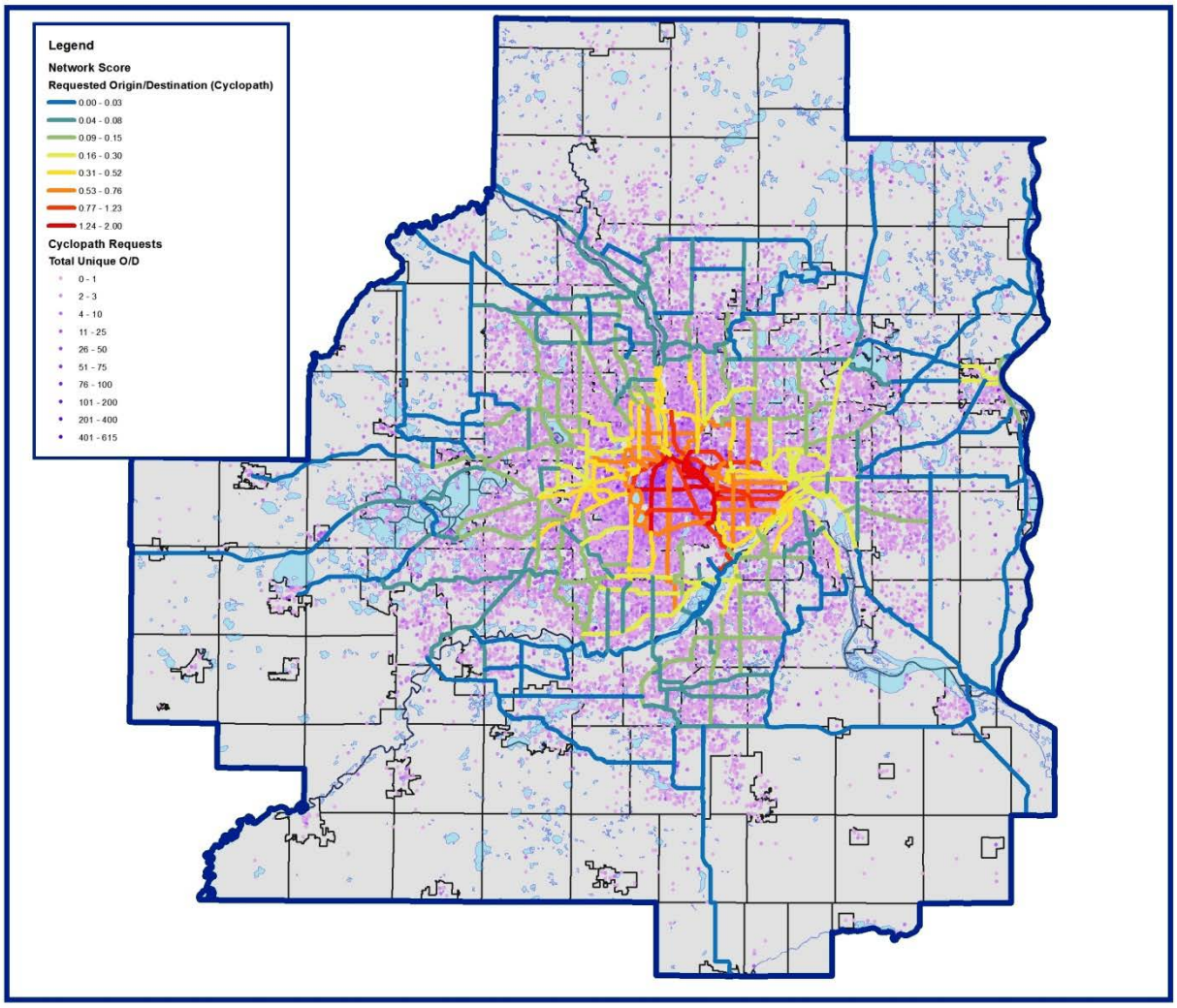
An additional category was provided to recognize regional destinations that were identified and then prioritized by group consensus during the June/July workshops.

***Category:* Feedback priority destinations**	
Description: During the workshops on June 27th and July 11th each group of participants were asked to consider a range of suggested destinations and work together to prioritize the five most important regional destinations in each quadrant of the region. The priority lists from each workshop group combined to make a list of 25 unique destinations. *Scoring:* The sum of these destinations that were captured in the buffer, normalized so the maximum possible score was 1 point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***



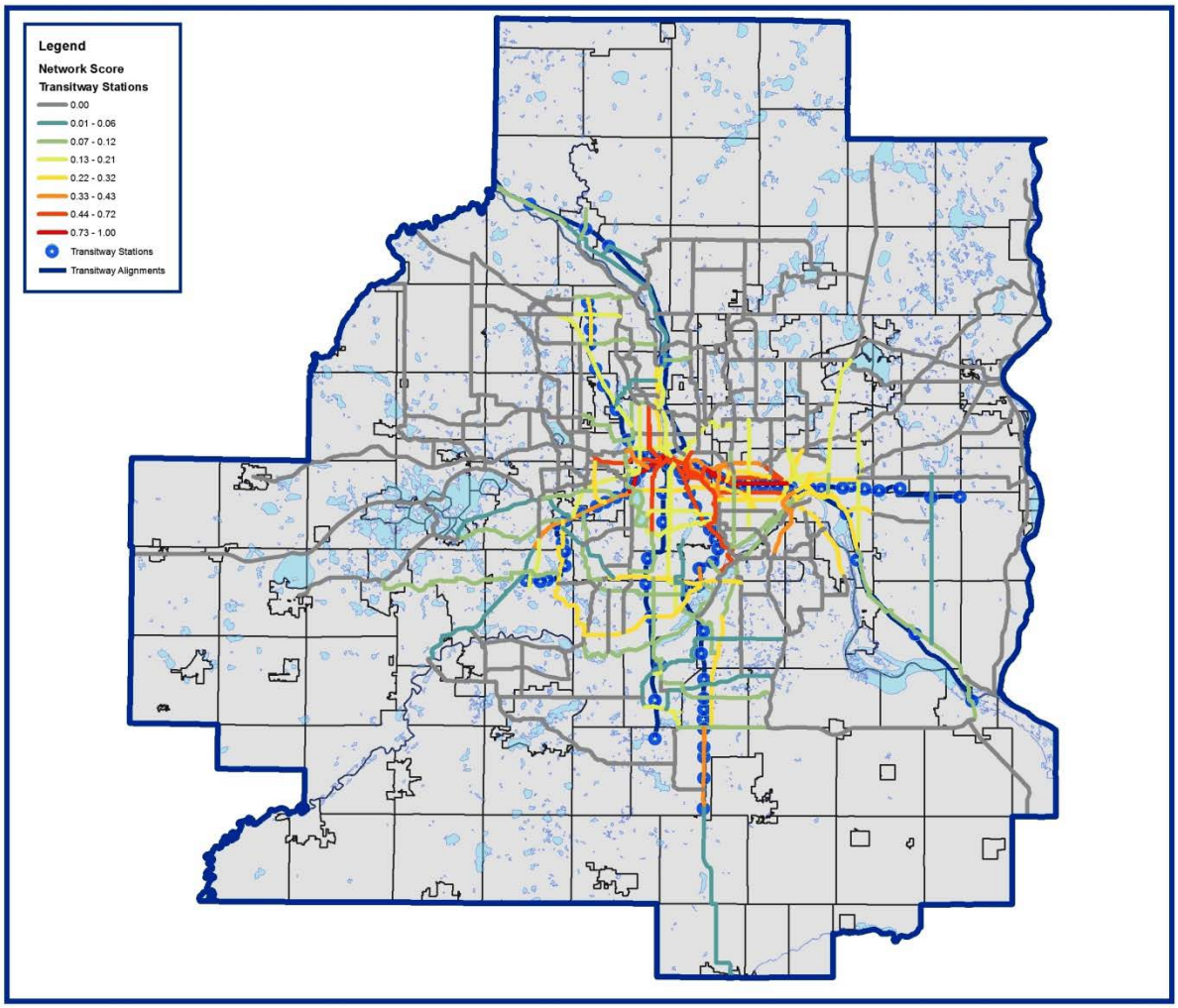
Origin Destination Demand. Cyclopath is a local online mapping-based bicycle route identification utility, built and hosted by the University of Minnesota's GroupLens Reseach group. This web-based "geowiki" application assists the general public in finding suitable bicycle routes and providing feedback about the quality of the bicycle experience along local facilities. This on-line routing tool has the ability to capture a unique data set containing every route request from the websites growing user audience. This includes both origin and destination data for every request since the website's inception. While these requests do not necessarily represent actual trips, they provide a great surrogate for potential demand across and beyond the seven county region.

Category: **Cyclopath origin and destination requests**	
Description: There were 27,143 unique origin and destination data request points from Cyclopath included in the analysis. *Scoring:* Two measures from the Cyclopath origins and destinations were added together to create the score: • The sum of the unique origin and destination *requests* that were captured in the buffer • The sum of the unique origin and destination *locations* that were captured in the buffer These two numbers were added together, and then normalized so the maximum possible score was 2 points.	*possible score:* ***2.0*** *percent contribution to cumulative corridors analysis score:* ***12.9%***


Legend
Network Score
Requested Origin/Destination (Cyclopath)
0.00 - 0.03
0.04 - 0.08
0.09 - 0.15
0.16 - 0.30
0.31 - 0.52
0.53 - 0.76
0.77 - 1.23
1.24 - 2.00
Cyclopath Requests
Total Unique O/D
0 - 1
2 - 3
4 - 10
11 - 25
26 - 50
51 - 75
76 - 100
101 - 200
201 - 400
401 - 615

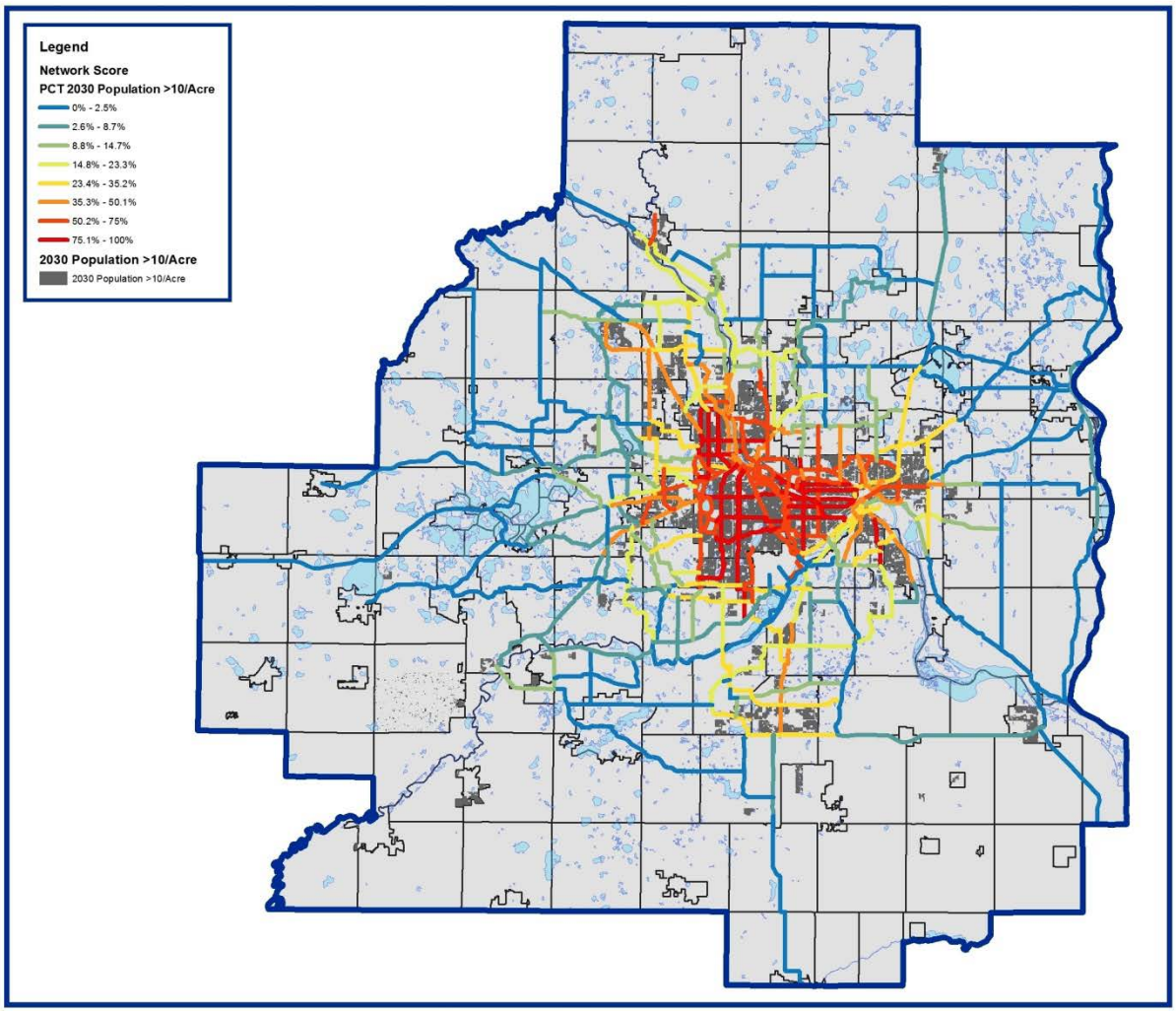
Connecting with Transit. One of the stated goals of this study is to better integrate the region's bicycle infrastructure with the region's transit infrastructure. The most meaningful connections between bicycle infrastructure and transit infrastructure will occur primarily at stations on regional transitways. The Metropolitan Council has data on all existing and planned stations along transitways across the metro area.

Category: Transitways and transit stations	
Description: These stations include existing stations on the Northstar Commuter Rail Line, the Blue Line (Hiawatha LRT), the Red Line (Cedar Avenue BRT), as well as stations that have been specifically planned and proposed along the Green Line (Central Corridor LRT and Southwest LRT), and the Gateway Corridor. *Scoring:* Number of transit stations captured per square mile in corridor buffer, and then normalized so the maximum possible score was 1 point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***



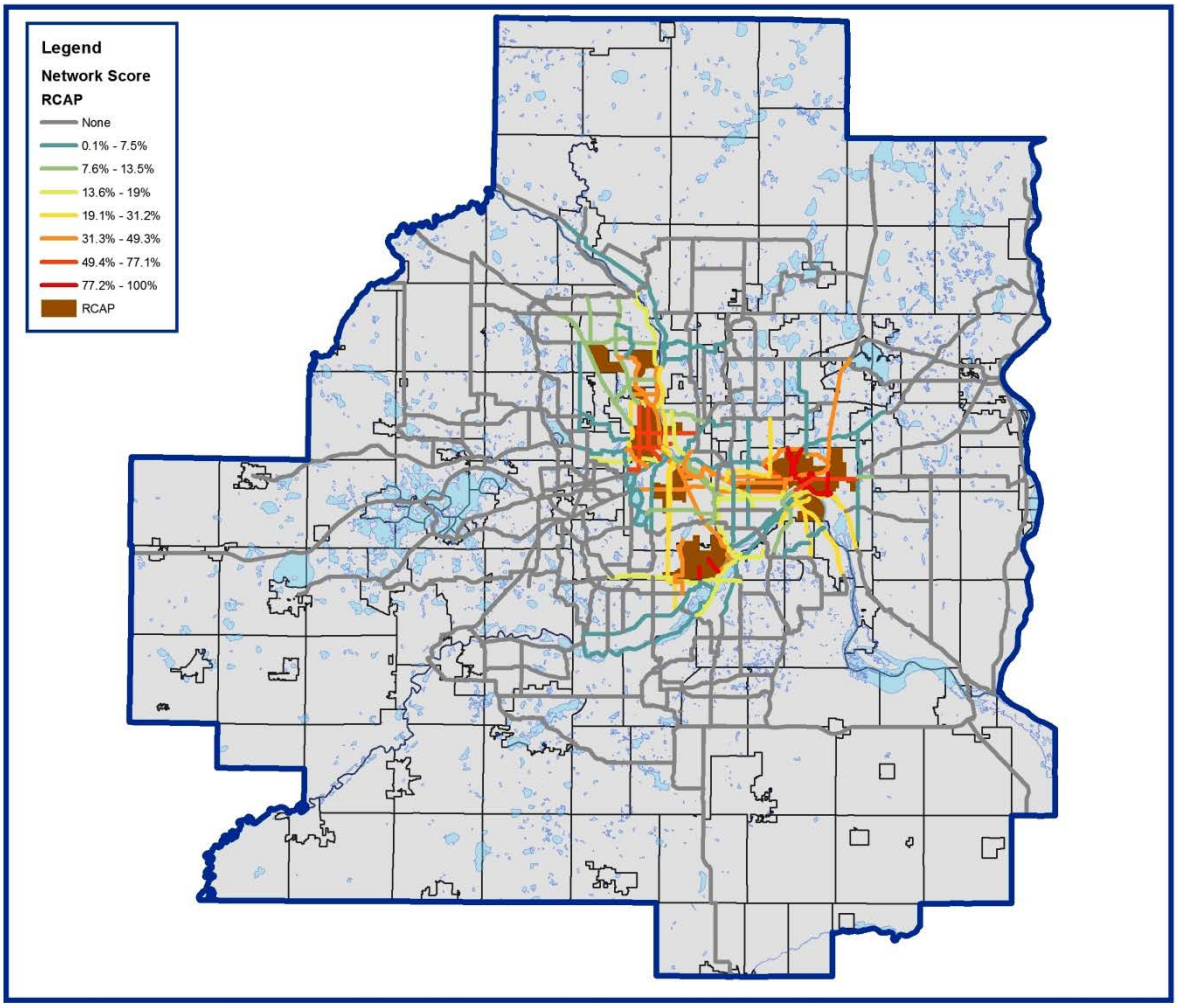
Future Population. As part of the Blueprint 2030 plan for regional growth, the Metropolitan Council projected population density for areas across the region. Establishing a Regional Bicycle Transportation Network to serve long range transportation needs is closely tied to the future population growth in the region.

Category: projected 2030 population density	
Description: Areas with population densities equal to or greater than 10 people per acre were identified, and selected from among the larger region as representing areas where the major destinations utilized in daily life were more likely to be easily accessible at bikeable distances. *Scoring:* Percent of buffer capturing areas projecting population density above 10 person/acre in 2030, normalized so the maximum possible score was 1 point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***



System Equity. As part of the Thrive MSP 2040 effort, the Metropolitan Council identified Racially Concentrated Areas of Poverty (RCAP). Given the diminished economic opportunity present in these areas, it was particularly important to ensure that a proposed bicycle network provide some level of equity to these underserved communities.

Category: **Racially Concentrated Areas of Poverty (RCAP)**	
Description: RCAPs are areas where more than 50 percent of the residents are people of color and more than 40 percent of the residents have incomes less than or equal to 185-percent of the Federal poverty line. The region's RCAPs are clustered in its urban core and inner-ring suburbs. Central cities such as Minneapolis and St. Paul and inner suburban areas such as Brooklyn Center, Brooklyn Park, Richfield, and Fort Snelling include census tracts that are RCAPs. *Scoring:* Percent of buffer capturing the RCAP areas, and then normalized so the maximum possible score was 1 point.	*possible score:* ***1.0*** *percent contribution to cumulative corridors analysis score:* ***6.5%***



These ten features were added together to create a total score for each corridor segment. The following is a map showing the composite scoring results for the proposed Regional Bicycle Transportation Network.