

Criteria Methodology

Chapter II presents the criteria and the methodology that were utilized in the scoring and ranking process for the Garfield County Transportation Plan. Chapter II also reviews the determination of the criteria and provides details on the results of the transportation projects' scoring and ranking process.

CRITERIA

The LSC team and Garfield County advisory team selected the criteria that were used in the scoring and ranking of the transportation projects. The following criteria were utilized in the ranking process:

- Level of Service
- Cost
- Facility Type
- Feasibility of Implementation
- Safety Issues
- Future Impact
- Link to the State Transportation Plan

The more important a criterion was considered to be, the greater the spread of the score. For criteria that were deemed very important, the score ranged from one point (lowest) to ten points (highest). Criteria that were considered to be of medium importance were scored from one point (lowest) to five points (highest). The criteria that were considered to be of low importance were scored between one point (lowest) and three points (highest). Criteria that were not considered to be important were given a score of zero to one point. By utilizing this methodology, the criteria that were deemed of greater importance for a project could receive a greater score, and therefore yield a higher ranking among the other projects.

Level of Service

The level of service (LOS) was one of the more important elements of the ranking and selection process. Working Paper #2 detailed the method of determining the LOS. Projects that had a LOS E or F in Working Paper #2 received a score of ten points. The projects with a LOS D received a score of five points. Projects with a LOS A, B, or C received a score of one point. The projects that were due to capacity deficiency all received a score of ten points. The projects due to surface conditions received scores based upon the LOS of their roadways (as defined in Working Paper #2). The above methodology was used to provide the highest scores to the projects that had the greater level of deficiency and need.

Cost

The cost of each project was determined based upon the general cost for the same type of project conducted within Garfield County over the past five years. Since project costs fluctuate over time, this criterion was given a low weight. Projects with a cost under \$100,000 received a score of three points. Projects with a cost of \$100,000 to \$399,000 received a score of two points. Projects with a cost over \$400,000 received a score of one point. The above methodology was used to provide the highest scores to the projects with the lowest cost for the greatest benefit.

Facility Type

The facility type criterion examined the projects in terms of roadway type and was considered to be very important to the future of the transportation system. The higher the roadway functional classification, the greater the score. Projects on arterial roadways received a score of ten points. Projects on collector roadways received a score of five points. Projects on local roadways received a score of one point. The above methodology was used to provide the highest scores to the projects that move the greatest number of individuals and improve the regional mobility.

Feasibility of Implementation

The feasibility of implementation examined each project in terms of five elements: flood zones, hazardous soils (which include the existing coal mines), wilderness

areas, wetlands, and topography. This criterion was scored based upon a reduction method. Each project started with five points and was reduced one point for each of the above elements that the project limits intersect. The above methodology was used to provide the highest scores to the projects with the least number of possible implementation limitations.

Safety Issues

Safety issues were reviewed on the roadways that the Transportation Advisory Committee identified as having a LOS E or F in the year 2025. Since the number of fatal accidents was not known, the LSC team examined these roadways in terms of the slope of the area (topography) and the average daily traffic (ADT). If both of these elements were high, then the roadway was considered to have a high potential for fatal accidents. A project received one point for each roadway that had a LOS E or F in the year 2025. A project also received one point if the topography had a known sight problem or a slope greater than 1:14. A project also received one point for each roadway that had an ADT greater than 2,000 vehicles. The above methodology was used to provide the highest scores to the projects with possible safety issues.

Existing Needs

The existing needs examination reviewed each project based upon present and future deficiency. If the deficiency exists currently, the project received a score of five points. If the deficiency is due to future growth and occurs over the next 20 years, the project received a score of one point. The above methodology was used to provide the highest scores to the projects that are currently deficient and have an existing need for transportation system improvements.

Link to the State Transportation Plan

The link criteria gives points to projects that are in the State Transportation Plans 2025 or 2030 or the State Transportation Improvement Program. The link criterion also gives points to projects whose roadways intersect with a state transportation project now or in the future. A project received a score of ten points if the project possessed any of the above links. The Transportation Advisory Committee believes

that it is important to create an economy of scale by building the state and county projects (roadways) simultaneously. These roadways are mainly the collectors and arterials that link with the state highways, and usually have the poorest LOS of the county roadways. The above methodology was used to provide the highest scores to the projects that create coordination with the state and Garfield County.

PRELIMINARY PROJECT PRIORITY

Using the methodologies detailed above to score and rank the transportation projects, the LSC team found that the level of service projects have the highest scores (ranging from 16 to 33 points) while the projects that improve surface conditions have the lowest scores (ranging from 9 to 27 points). The reason for the above variance is that greater weight, and thus higher scores, were given to projects that are or will be deficient in their LOS (by as much as ten points). The LOS point difference makes up one-third of the total points for many projects. Another major factor for the point variance is that projects linked to the state transportation plans received ten points. The link factor accounts for another one-third of the total points for many projects. Hence, LOS deficient projects and linked projects moved to the top of the list, and those projects with good LOS and no link were ranked low on the project list. Chapter III provides additional detail on the transportation project scoring and ranking.