

Prioritization 6.0

Scoring Criteria, Weights, and Normalization for All Modes (with Criteria Definitions)

Recommended by the P6.0 Workgroup to the Board of Transportation on June 6, 2019

The purpose of this document is to outline the criteria, weights, and scoring process recommendations resulting from the P6.0 Workgroup in accordance with the Strategic Transportation Investments law. The goal is the understanding of each mode’s scoring within the overall Prioritization process, in order to achieve approval by the Board of Transportation.

Each mode is displayed with criteria and associated weights for the **Statewide Mobility**, **Regional Impact**, and **Division Needs** categories. Following the criteria and weights is a list of definitions for each criteria, specific to each mode.

Below is an example of how criteria (in any mode) are weighted to calculate a quantitative score, and how that score later combines with the Local Input to create a project’s total score.

Quantitative Score vs. Local Input				
Funding Category	QUANTITATIVE		LOCAL INPUT	
	Data		Division	MPO/RPO
Statewide Mobility	Criteria 1 = 30%	} 100%	--	--
	Criteria 2 = 25%			
	Criteria 3 = 15%			
	Criteria 4 = 10%			
	Criteria 5 = 15%			
	Criteria 6 = 5%			
Regional Impact	Criteria 1 = 20%	} 70%	15%	15%
	Criteria 2 = 20%			
	Criteria 3 = 10%			
	Criteria 4 = 10%			
	Criteria 5 = 10%			
Division Needs	Criteria 1 = 15%	} 50%	25%	25%
	Criteria 2 = 15%			
	Criteria 3 = 10%			
	Criteria 4 = 5%			
	Criteria 5 = 5%			

Highway Criteria & Weights

Mobility Projects (Roadway Widening, Intersection/Interchange Improvements, Access Management):

Statewide Mobility		Regional Impact		Division Needs	
30%	Congestion	20%	Benefit-Cost	15%	Benefit-Cost
25%	Benefit-Cost	20%	Congestion	15%	Congestion
25%	Freight	10%	Accessibility/Connectivity	10%	Safety
10%	Economic Competitiveness	10%	Freight	5%	Accessibility/Connectivity
10%	Safety	10%	Safety	5%	Freight

Modernization Projects (Modernize Roadway, Upgrade Freeway to Interstate):

Statewide Mobility		Regional Impact		Division Needs	
25%	Freight	25%	Safety	20%	Safety
25%	Safety	10%	Freight	10%	Pavement Condition
20%	Paved Shoulder Width	10%	Lane Width	10%	Paved Shoulder Width
10%	Congestion	10%	Pavement Condition	5%	Freight
10%	Lane Width	10%	Paved Shoulder Width	5%	Lane Width
10%	Pavement Condition	5%	Congestion		

Congestion: Measurement of the traffic volume (accounting for seasonal traffic) on the roadway compared to the existing capacity of the roadway, weighted by the traffic volume (accounting for seasonal traffic) along the roadway.

Benefit/Cost: Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT, and the amount of other/local funds compared to the total project cost.

Freight: Measurement of truck volume and truck percentage of total traffic on the roadway, and the degree the project is helping to complete a future interstate corridor (if applicable).

Safety: Measurement of the existing severity, frequency, and rate of crashes along the roadway and the safety benefits the project is expected to provide over 10 years.

Economic Competitiveness: Measurement of the estimated percent change in economic activity within the county and the percent change in the number of long term jobs that the project is expected to provide over 10 years.

Accessibility/Connectivity: Measurement of county economic distress indicators and the degree the project upgrades mobility of the roadway, with the goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network.

Lane Width: Measurement of lane width deficiencies compared to the NCDOT standard for each roadway facility type.

Paved Shoulder Width: Measurement of paved shoulder width deficiencies compared to the NCDOT standard for each roadway facility type.

Pavement Condition: Measurement of overall pavement condition using the NCDOT's pavement condition rating (PCR).

Aviation Criteria & Weights

Statewide Mobility		Regional Impact		Division Needs	
40%	NCDOA Project Rating	30%	NCDOA Project Rating	25%	NCDOA Project Rating
30%	FAA ACIP Rating	15%	Benefit/Cost	10%	Benefit/Cost
20%	Benefit/Cost	15%	FAA ACIP Rating	10%	FAA ACIP Rating
10%	Constructability Index	10%	Constructability Index	5%	Constructability Index

NCDOA Project Rating: Scores projects based on project categories within the NC Airports System Plan, developed by the NCDOT Division of Aviation (DOA). Points are assigned based on priority and need of the project.

FAA ACIP Rating: Scores projects based on ratings within the Federal Aviation Administration (FAA) Airport Capital Improvement Plan (ACIP). Ratings are based on critical airport development and capital needs for the National Airspace System (NAS).

Constructability Index: Scores projects based on various measures of a project's readiness for construction.

Benefit/Cost: Measurement of a project's total economic contribution compared to the cost of the project to NCDOT, and the amount of other/local funds compared to the total project cost.

Bicycle/Pedestrian Criteria & Weights

Statewide Mobility	Regional Impact	Division Needs	
(not eligible)	(not eligible)	20%	Safety
		15%	Accessibility/Connectivity
		10%	Demand/Density
		5%	Cost Effectiveness

Safety: Measurement of the number of bicycle and pedestrian crashes, severity of the crashes, crash risk based on existing surroundings, and safety benefit the project is expected to provide.

Accessibility/Connectivity: Measurement of the quantity of destinations near the project, the quantity of connections to existing or planned bicycle/pedestrian facilities, and whether the project improves or connects to a designated bicycle route.

Demand/Density: Measurement of the population and employment density within a walkable or bikeable distance of the project.

Cost Effectiveness: Measurement of total Safety, Accessibility/Connectivity, and Demand/Density criteria scores compared to the cost of the project to NCDOT.

Ferry Criteria & Weights

Statewide Mobility	Regional Impact		Division Needs	
(not eligible)	20%	Capacity/Congestion	15%	Asset Condition
	15%	Asset Condition	15%	Asset Efficiency
	15%	Asset Efficiency	10%	Accessibility/Connectivity
	10%	Accessibility/Connectivity	10%	Benefits
	10%	Benefits		

Capacity/Congestion: Measurement of the number of vehicles left behind at each departure compared to the total number of vehicles loaded and carried by the route.

Asset Condition: Measurement of the asset condition rating by the NCDOT Ferry Division.

Asset Efficiency: Measurement of the cost effectiveness of continued maintenance of the asset compared to replacement of the asset.

Benefits: Measurement of the monetized value of the number of hours saved by utilizing the ferry route instead of taking the shortest alternative roadway route.

Accessibility/Connectivity: Measurement of the number of jobs, services, and other points of interest near the project.

Public Transportation Criteria & Weights (Mobility Projects)

Statewide Mobility	Regional Impact		Division Needs	
(not eligible)	25%	Cost Effectiveness	20%	Cost Effectiveness
	20%	Demand/Density	10%	Demand/Density
	15%	Impact	10%	Efficiency
	10%	Efficiency	10%	Impact

Impact: Measurement of the trips generated and relieved by the project in 10 years.

Demand/Density: Measurement of the total trips along the project route in 10 years compared to the service area population for the project route.

Efficiency: Measurement of the total trips along the project route in 10 years compared to the total revenue seat hours of the project route in 10 years.

Cost Effectiveness: Measurement of the trips generated by the project in 10 years compared to the cost of the project to NCDOT (annualized by the lifespan of the project).

Public Transportation Criteria & Weights (Demand Response Projects)

Statewide Mobility	Regional Impact		Division Needs	
(not eligible)	25%	Cost Effectiveness	15%	Cost Effectiveness
	20%	Demand/Density	15%	Demand/Density
	15%	Efficiency	10%	Efficiency
	10%	Impact	10%	Impact

Impact: Measurement of the trips generated by the project in 10 years.

Demand/Density: Measurement of the total operating hours of the system in 10 years compared to the service area population for the system.

Efficiency: Measurement of the number of vehicles in maximum service by the system compared to the total number of vehicles in the fleet (utilization ratio).

Cost Effectiveness: Measurement of the trips generated by the project in 10 years compared to the cost of the project to NCDOT (annualized by the lifespan of the project).

Public Transportation Criteria & Weights (Facility Projects)

Statewide Mobility	Regional Impact	Division Needs	
(not eligible)	(not eligible)	15%	Cost Effectiveness
		15%	Impact
		10%	Demand/Density
		10%	Efficiency

Impact: Measurement of the trips generated by the project in 10 years.

Demand/Density: Growth trend of ridership for the system over the previous 5 years.

Efficiency: Measurement of the total trips at the facility with the project in place (passenger facilities), the square footage per employee (administrative facilities), or the number of vehicles per bay (maintenance facilities).

Cost Effectiveness: Measurement of the trips generated by the project in 10 years compared to the cost of the project to NCDOT (annualized by the lifespan of the project).

Rail Criteria & Weights

Statewide Mobility		Regional Impact		Division Needs	
35%	Benefit-Cost	25%	Benefit-Cost	15%	System Opportunities
30%	Safety	15%	Safety	10%	Benefit-Cost
15%	System Opportunities	10%	Capacity and Diversion	10%	Capacity and Diversion
10%	Capacity and Diversion	10%	Economic Competitiveness	10%	Safety
10%	Economic Competitiveness	10%	System Opportunities	5%	Economic Competitiveness

Benefit-Cost: Measurement of monetized benefits compared to the cost of the project to NCDOT, and the amount of other/local funds compared to the total project cost.

Safety: Measurement of crash potential at highway/rail crossings, based on the NCDOT Rail Division's Investigative Index.

System Opportunities: Measurement of the project's degree of access to industrial/commercial development or nearby points of interest, and the degree of interaction between Rail and other modes.

Capacity and Diversion: Measurement of train volume compared to track capacity, and the amount of freight and/or passenger volumes diverted off highways by the project.

Economic Competitiveness: Measurement of the estimated number of full time jobs created in 20 years.

Normalization in P6.0

- **Statewide Mobility** (only) – No normalization, scores are stand-alone for comparison (Highway, Aviation, and Freight Rail eligible projects)
- **Regional Impact & Division Needs** – Allocate funds to Highway and Non-Highway modes based on minimum percentages (shown below)

Mode	Statewide Mobility	Regional Impact	Division Needs
Highway	No Normalization	90% minimum (Region competition)	90% minimum (Division competition)
Non-Highway		4% minimum (Statewide competition)	4% minimum (Division competition)
Flex (All Modes)		6% (Region competition)	6% (Division competition)

Committed Projects – Not subject to re-evaluation in P6.0

- First Right-of-Way (ROW) OR Construction (CON) date in 2020-2025 based on Final 2020-2029 STIP (first 6 years of STIP)

Carryover Projects – Automatically carry over from P5.0 for evaluation in P6.0

Project must meet at least one of the following criteria:

- Programmed in the Final 2020-2029 STIP, but not considered a Committed Project
- Sibling of a programmed project (where unfunded limits are included in a single NEPA/SEPA document)
- Project has a NEPA/SEPA document completed within the last 10 years (2009-2018) or the NEPA/SEPA document is actively being worked on (with scoping meeting completed by 12/31/2018)

Number of Project Submittals for Each Mode

MPOs and RPOs:

- Base of 12 submittals, plus:
 - + One additional submittal for every 50,000 in population
 - + One additional submittal for every 500 centerline miles

NCDOT Divisions:

- 14 submittals each

All submittals must be coordinated with associated MPOs, RPOs, and Divisions.

Number of Local Input Points for Regional Impact and Division Needs Categories

Number of Points per Area:

- Base of 1,000 points, plus:
 - + 100 additional points for every next 50,000 in population
- Maximum 2,500 points per area
- Same allocation of points for Regional Impact and Division Needs categories
- 100 point max per project per category
- Flex Policy (new in P6.0): up to 500 points (half of base allotment) can be transferred between Regional Impact and Division Needs within an organization