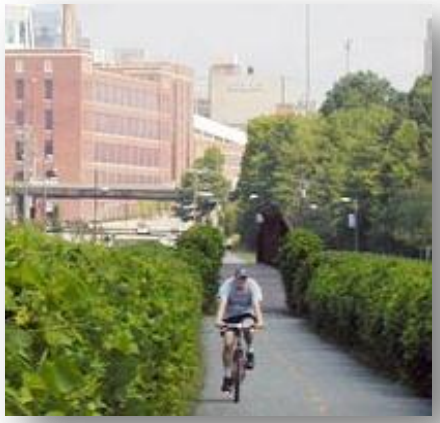
Prioritization 3.0/Strategic Transportation Investments

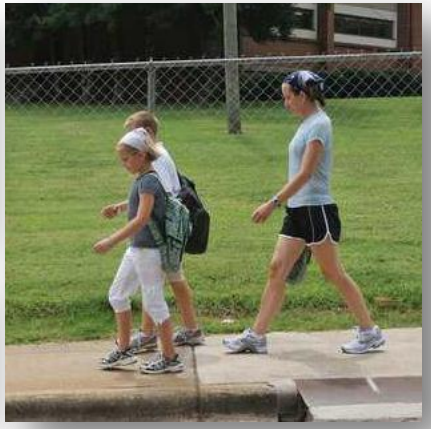
BOT Approved Bicycle and Pedestrian Quantitative Scoring Criteria

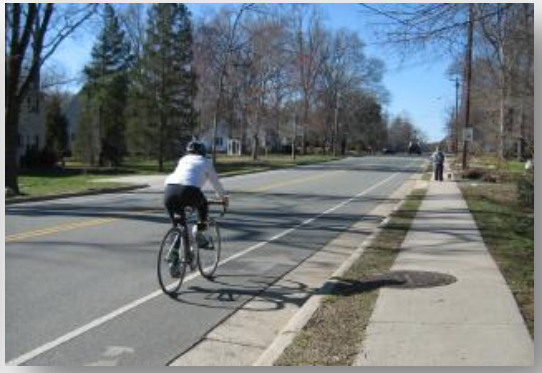
September 10, 2013

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BICYCLE & PEDESTRIAN







Bicycle and Pedestrian – Eligibility Definitions

Types of Bicycle and Pedestrian Eligible Projects evaluated in P3.0 – Division Needs Only

- Bike lane
- Multi-use path/greenway
- Paved shoulder
- Sidewalk
- Pedestrian signal
- Other streetscape/pedestrian improvements *(median refuge, crossing improvements, etc.)*

Bicycle and Pedestrian – Prioritization

- All future bicycle and pedestrian projects, independent of roadway projects will require a local match
  - Federal funding typically requires 20% match
  - State law prohibits state funds *(except for Powell Bill Funds)*
- Bicycle and Pedestrian projects may only compete at the Division Needs level
- ROW is not an included project cost to NCDOT
- Minimum project cost requirement – $100,000
- Plan adoption is used as an initial project screening question - *project must be specifically identified in a locally adopted bicycle plan, pedestrian plan, greenway/multi-use plan, or Safe Routes to School (SRTS) action plan*

Bicycle and Pedestrian – Scoring Criteria

	STI Methodology (Bike/Ped)	MPO/RPO - Common Scoring Criteria	National Study of DOTs
Access	✓	✓	✓
Adopted Plan	□	✓	✓
Benefit-Cost	✓		
Connectivity		✓	✓
Demand/Density	✓	✓	✓
Livability/Health			✓
Multimodal			✓
Constructability	✓	✓	
Regional/Multi-jurisdictional		✓	
Safety	✓	✓	✓
Social Equity			✓

Bicycle and Pedestrian – Division Needs

Criteria	Proposed Weight
Safety	15%
Access	10%
Density	10%
Constructability	5%
Benefit-Cost	10%

Bike/Pedestrian Criteria – Safety

Definition: Projects or improvements where bicycle or pedestrian accommodations are non-existent or inadequate for safety of users

Why use this criteria: To reduce vehicle-bicycle/pedestrian crash rates or improve safety

How it's measured: Crash history and posted speed limits

Sources: – Division of Bike and Pedestrian Transportation (DBPT) 2007-2011 geocoded crash data

– NCDOT *(Road Characteristics Data or Other)*

Proposed Scoring Scale: 0-100

Bike/Pedestrian Crashes: 50% weight (0-100 pts.)
Posted Speed Limits 50% weight (0-100 pts.)

Recommended Weighted % per Criteria: 15%

Bike/Ped Criteria – Safety Calculation (15%)

Proposed Scoring Scale: 0-100

Bicycle/Pedestrian Crashes: 50% weight: (0-100 points)

- Bicycle or pedestrian crashes within last 5 years along the corridor
- For multi-use projects, both bicycle and pedestrian crash data will be used
- For new off-road facilities, crash data for parallel routes will be used

Number of Crashes	50% Weight x Total Pts
5 or more crashes	100
4 crashes	80
3 crashes	60
2 crashes	40
1 crash	20

Posted Speed Limits: 50% weight (0-100 pts.)

- Posted speed limit

Posted Speed Limit	50% Weight x Total Pts
55 and over	100
40 to 50	50
30 to 40	25
25	10

Bike/Ped Criteria – Access

Definition: Destinations that draw or generate high volumes of bikes/pedestrians

Why use this criteria: To identify projects with most opportunity for mode share

How it's measured: Type of and distance to destination

Source: Destination: Destination Type Local Input

Proposed Scoring Scale: 0-100

Destination Type: 50 % weight (0-100 points)

Primary centers: municipal/transit, employment, universities, mixed-use commercial, national/state tourist destinations, high-density residential/multi-family, sports venue (10 points each, maximum 70 points)

Secondary centers: lower-density residential developments, fixed-guideway facilities, minor employment, schools, parks, municipal building (5 points each, maximum 30 points)

Distance to Prime Destination: 50% weight (0-100 pts.) Pedestrian – 0 miles (100 pts.) to 0.5 miles (0 pts.)/Bicycle – 0 miles (100 pts.) to 1.5 (0 points)

Recommended Weighted % per Criteria: 10%

Bike/Ped Criteria – Demand/Density

Definition: Areas with significant residential or employment density

Why use this criteria: To support access criteria and identify projects with most user benefit

How it's measured: Persons and employees per square mile within 1½ miles bicycle or 1/2 mile pedestrian facility

Sources: 2010 US Census and Local Employment Dynamics

Proposed Scoring Scale: 0-100

Range of points: Depending on density of residential population or employees

Recommended Weighted % per Criteria: 10%

Bike / Ped Criteria – Constructability

Definition: Readiness of project to be administered and maintained by the local government

Why use this criteria: To identify projects which can be easily and quickly implemented

How it's measured: Right-of-Way (ROW) Acquisition, Preliminary Engineering, Environmental Impacts

Sources: Local Input and Highway Division Input

Proposed Scoring Scale (0-100)

- Percentage of ROW Acquired: 50% weight (0-100 points)
- Percentage of Preliminary Engineering/Project Design Work Completed: 25% weight (0-100 points)
- Estimated Environmental Impacts (CE Type I/II, EA, EIS): 25% weight (0-100 points)

Recommended Weighted % per Criteria: 5%

Bike/Ped Criteria – Benefit/Cost (10%)

Definition: Ratio of calculated user benefit divided by NCDOT project cost

Why use this criteria: To evaluate cost-effectiveness

Proposed Scoring Scale: 0-100
Calculated Score, scaled to range of 0-100

Calculation:

(Access Points + Demand/Density Points) / Estimated Project Cost to NCDOT = Project Benefit-Cost

Recommended Weighted % per Criteria: 10%