

# BLOS Analysis Methods

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# Bicycle Level of Service (BLOS)

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- ❑ Quantifies a cyclist's perceived safety in a bicycle lane, as a function of various roadway factors.
- ❑ PLOS – Pedestrian Level of Service, measures walking conditions
- ❑ Similar to vehicle LOS (Highway Capacity Manual, focused on delay)



# Bicycle Facility Users

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## Advanced/Experienced Rider

- Use bicycles as a motor vehicle, ride with vehicles
- Ride for speed, convenience

## Basic/Less Confident Adult Rider

- Prefer to avoid roads with busy/fast vehicle traffic
- Comfortable riding on neighborhood streets, shared use trails, bicycle lanes

## Children Riders

- Lower speed riders, stick to trails, low traffic roads
- \*Less control = no bike lanes, or use with supervision

# How to use BLOS

*Where are locations for bicycle lanes in my study area that offer good riding conditions for cyclists and foster cyclist security?*

- ❑ BLOS used for on-road facilities only (lanes), **NOT** off-road facilities
- ❑ Safety is imperative – cyclists will share road with motorized vehicles
- ❑ Bicycle lanes = paved shoulders = increased motorized vehicle safety



[www.bicycling.511.org](http://www.bicycling.511.org)



# How to apply BLOS

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- *Individual road segment analysis* – “Would bicycle lanes be reasonable on Greene Avenue?”
- *System analysis* – “We would like bicycle lanes from Beige Building to Browne Park. What roadways would be best for bicycle lanes?”



# Calculating BLOS

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- ❑ Web calculator developed by the League of Illinois Bicyclists

<http://www.bikelib.org/roads/blos/>

- ❑ Calculator may be used for individual corridors or larger scale projects
- ❑ GIS may also be used for large-scale projects
  - Could program BLOS equation into a GIS database containing the other BLOS inputs
  - Could also calculate BLOS in web calculator, program result in GIS, and map by BLOS to determine best possible routes



BLOS/BCI Form - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Stop Print Mail Stop

Address <http://www.bikelib.org/roads/blos/blosform.htm> Links >>

Google Go Bookmarks 45 blocked Check Settings

## BLOS/BCI Calculator Form

To calculate Bicycle Level of Service (BLOS) and Bicycle Compatibility Index (BCI) of a particular roadway section, fill out the following for the typical cross-section. Results will pop up in a new window. Default values will be used for any fields left empty.

Some details on the BLOS input fields and their ranges are [here](#). Further information and references on these measures are [here](#).

Through lanes per direction: (Default = 1)

Width of outside lane, to outside stripe, in ft: (Default = 12)

Paved shoulder, bike lane, OR marked parking area - outside lane stripe to pavement edge, in ft: (Def=0)

Bi-directional Traffic Volume in ADT: (Default = 4000)

Posted speed limit in mph: (Default = 30)

Percentage of heavy vehicles: (Default = 2)

FHWA's pavement condition rating: (5 = Best, 1 = Worst; Default = 4)

Percentage of road segment with occupied on-street parking: (Default = 0)

On-street parking time limit, in minutes: (Default = 120)

Goes through residential area?: (Default = No)

Internet

 & ASSOCIATES  
Engineers and Planners

# BLOS Scale: Output from Equation

BLOS	Numerical Range	Description
A	Below 1.50	Extremely High
B	1.51 – 2.50	Very High
C	2.51 – 3.50	Moderately High
D	3.51 – 4.50	Moderately Low
E	4.51 – 5.50	Very Low
F	Above 5.50	Extremely Low



# Mississippi River Trail - Example

- <http://www.mississippirivertrail.org/>
- <http://www.iowabikes.com/mrt/index.htm>



B-35

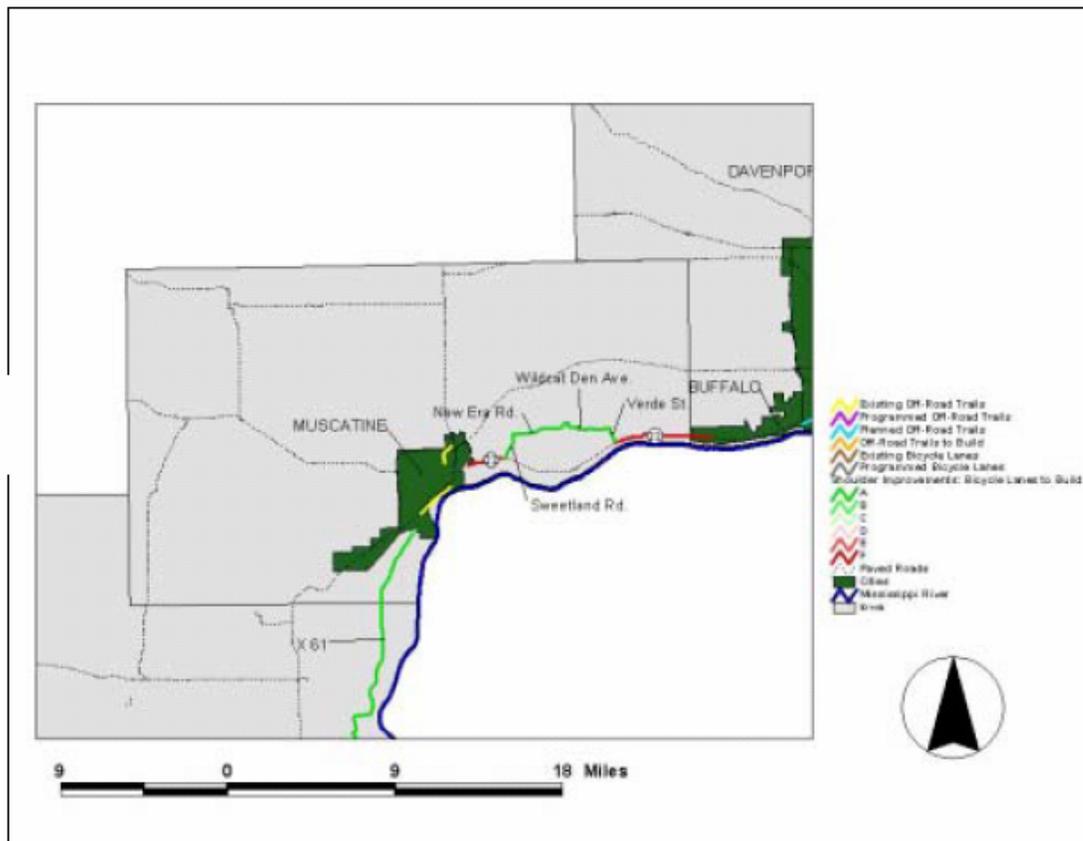


Figure B.34. Shoulder Improvements Study: Muscatine County



# Thanks, and have safe rides!

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*San Francisco Bicycle Program*



*National Safe Routes to School*