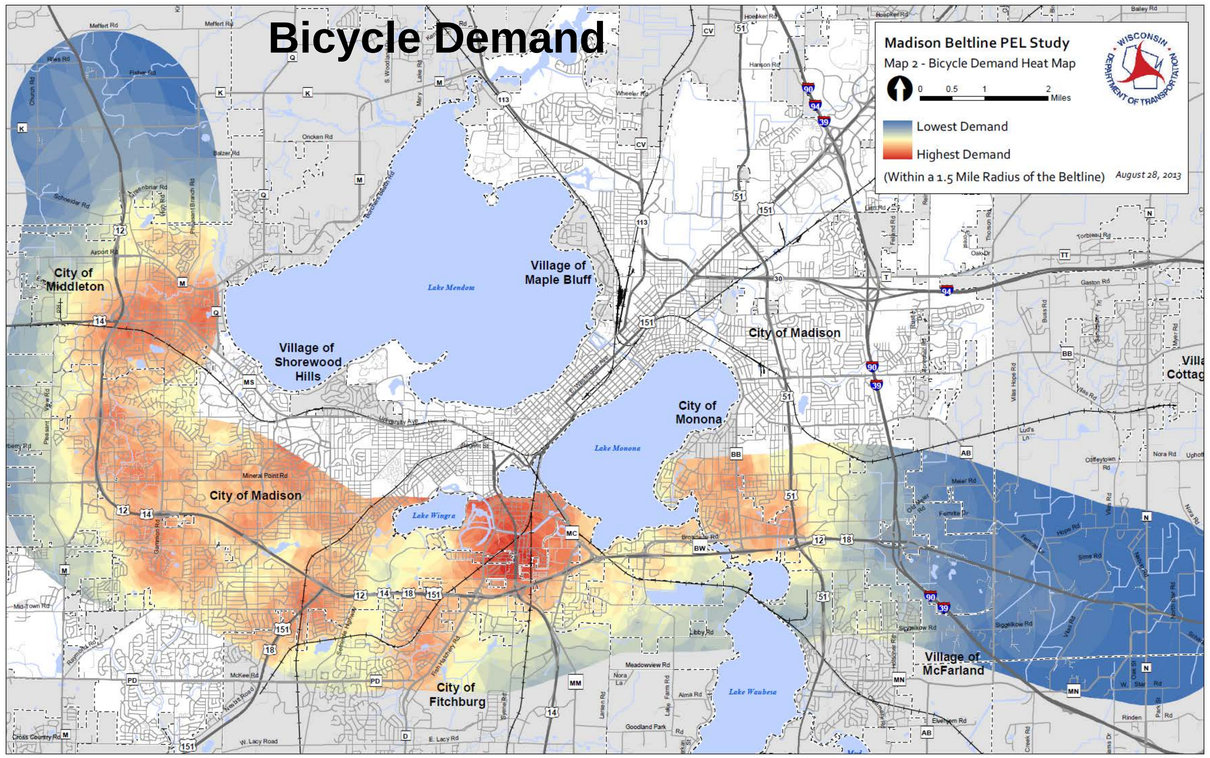
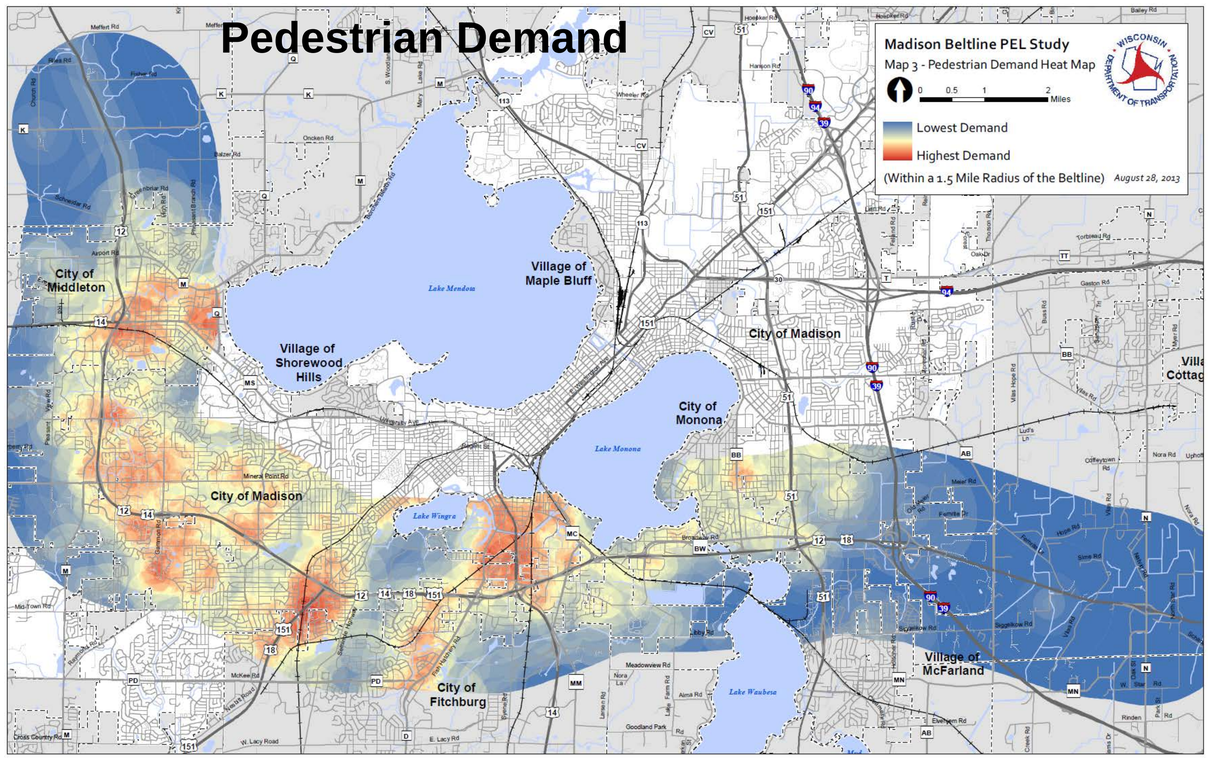
# Pedestrian and bicycle travel demand

About 4.7 percent of Madison work trips are made by bicycle and Madison ranks 18th in the nation for bicycle commuting. Accommodating and encouraging pedestrian and bicycle travel is a priority of the Federal Highway Administration and the Wisconsin Department of Transportation.

## Pedestrian and bicycle heat maps

The following bicycle and pedestrian heat maps illustrate the demand (existing and latent) for bicycle and pedestrian facilities within 1.5 miles of the Beltline. Demand is determined by the concentration and proximity of various trip generators and destinations, such as employment centers, schools, grocery stores, etc. The red and orange hues illustrate the areas with high potential for bicycle and pedestrian trips near the Beltline.

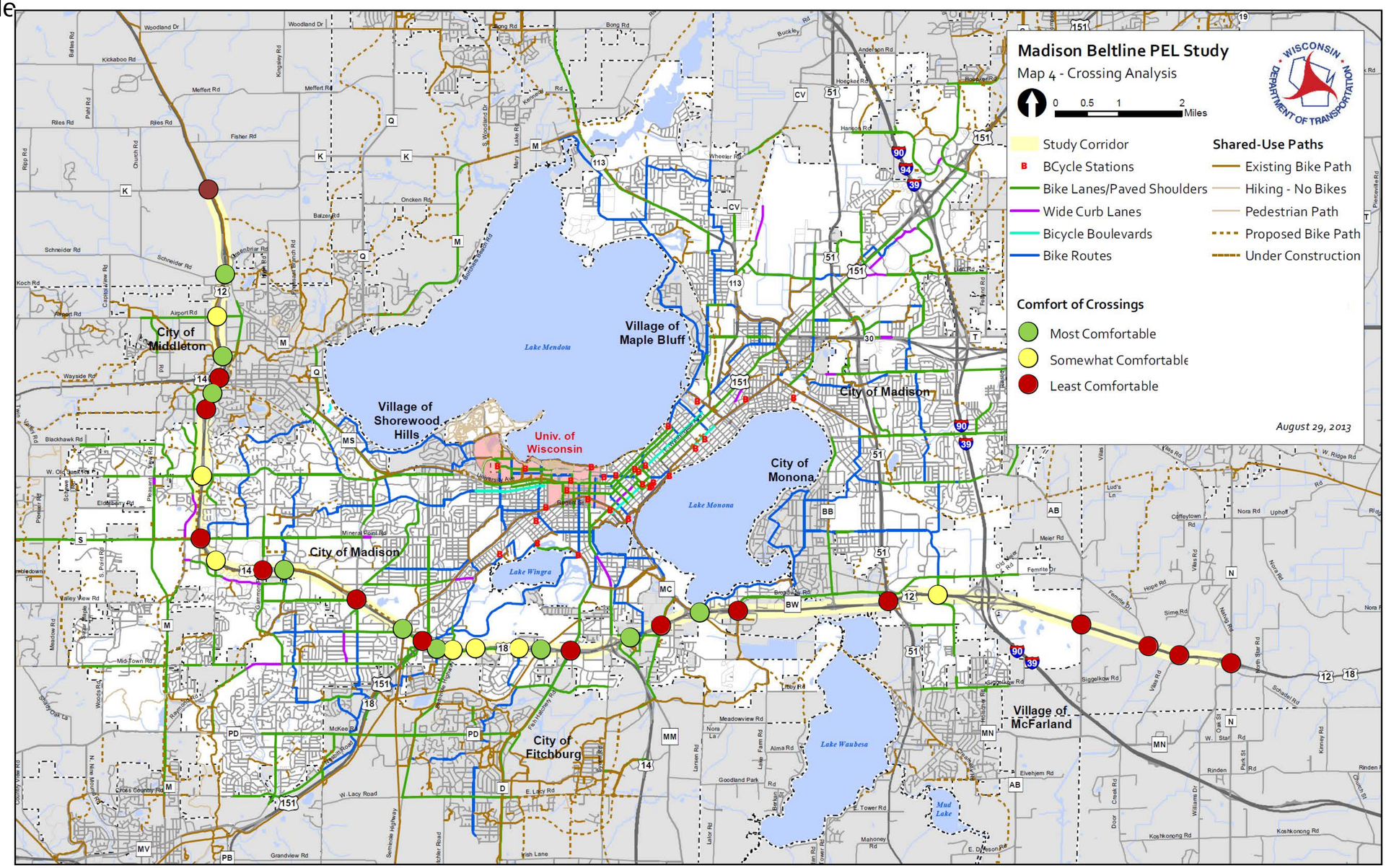



FHWA guidance on sustainable highways states that in addition to addressing environmental and natural resource needs, the development of a sustainable highway focuses on access (not just mobility), moving people and goods (not just vehicles), and providing people with transportation choices, such as safe and comfortable routes for walking, cycling, and transit.

# Pedestrian and bicycle accommodations

Currently there are 31 pedestrian and bicycle crossings of the Beltline. The crossings have a comfort rating. The comfort rating is based on the bicycle Level of Service, the pedestrian Level of Service, and the crossing design. The rating is designed to reflect how comfortable a user feels while making the crossing. Green signifies most comfortable, Yellow signifies somewhat comfortable, Red signifies least comfortable.



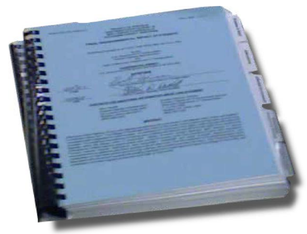

More information is available regarding the rating systems upon request.

# Planning and Environment Linkages (PEL)

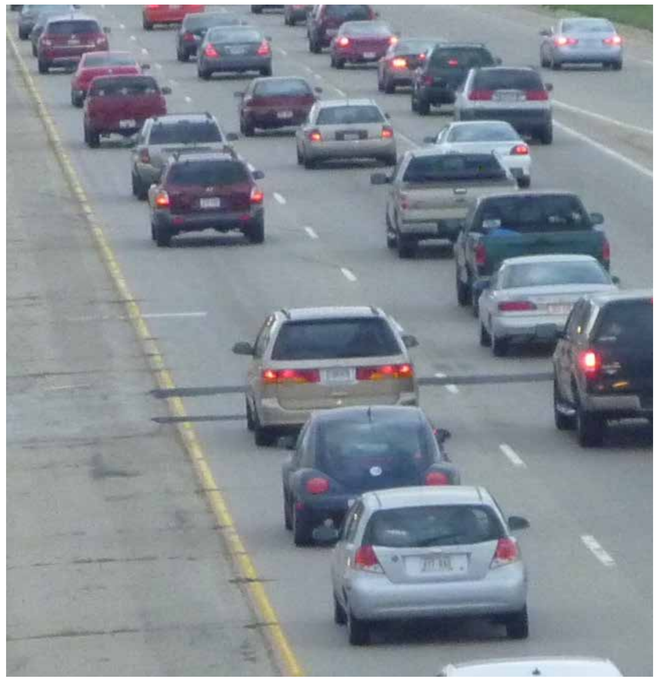
FHWA and WisDOT are using the PEL study to evaluate the Beltline. A Planning and Environment Linkages (PEL) study is one of FHWA's "Every Day Counts" initiatives and is part of MAP-21 (Moving Ahead for Progress in the 21st Century) Act legislation. The PEL process is used as an effective and efficient way to integrate early planning into the highway development process and reduce delays in meeting transportation needs. The Beltline PEL study allows for early development, evaluation, and screening of broad regional solutions. Potential solutions that are determined to be unreasonable will be dismissed. Those that show promise for satisfying Beltline needs, along with other pertinent PEL study results, will form the foundation for the National Environmental Policy Act (NEPA) environmental analysis, such as environmental impact statements. The NEPA evaluation will start after the completion of the PEL study.

**Planning and Environment Linkages Process**

**Develop Problem Statement, Goal, and Objectives** → **Develop Screening Criteria** → **Develop Strategies and Evaluate (Screen)** → **Identify Strategies to Bring Forward into Further Study and NEPA**



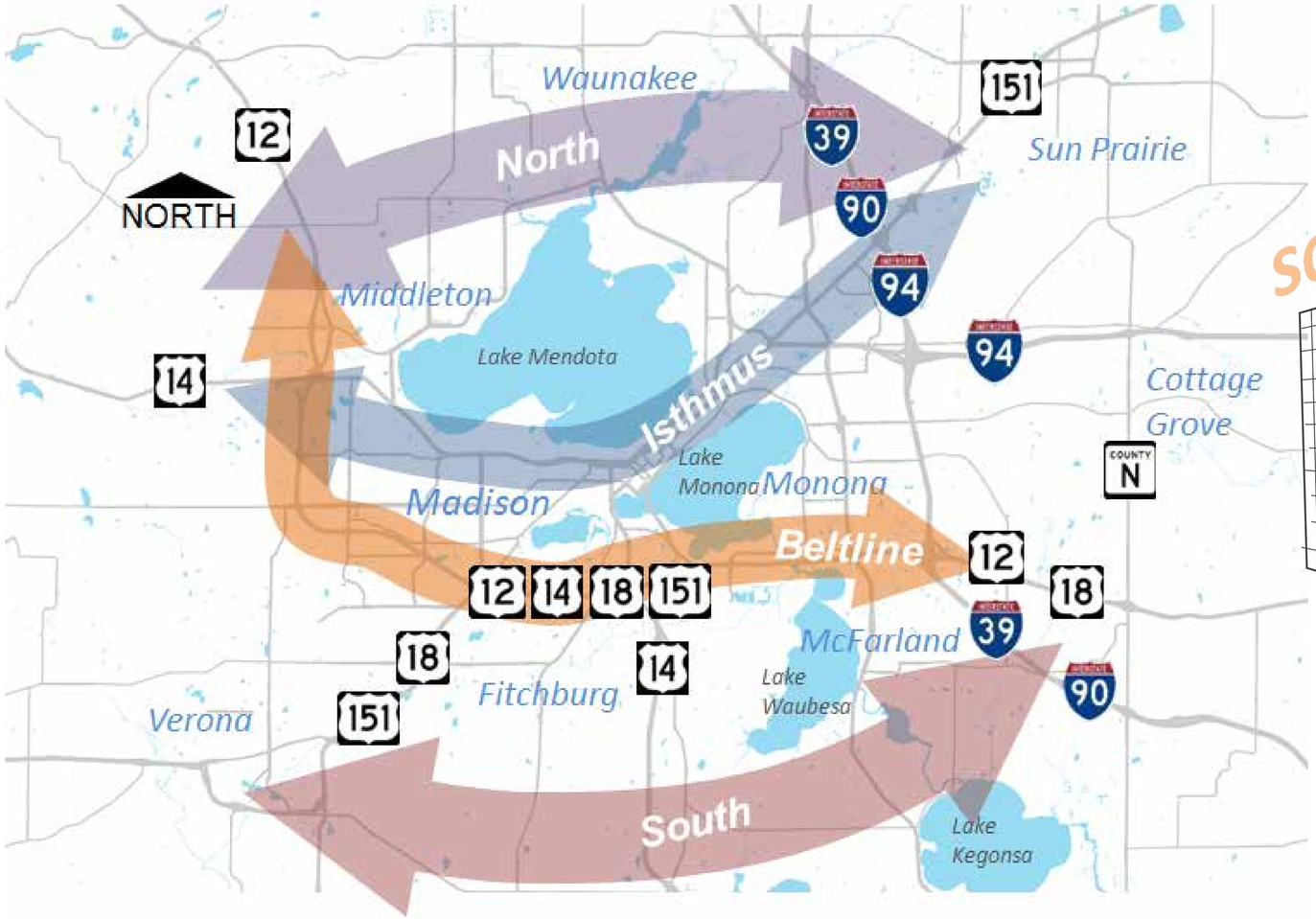
**Environmental Impact Statement**



The graphic above summarizes the Planning and Environment Linkages process. It starts with developing a Problem Statement, Goal, and Objectives, which is occurring in the fall of 2013. Then screening criteria and strategies are developed. Screening involves eliminating strategies that do not solve the problem and are ineffective. Strategies that show promise in addressing Beltline issues will be brought forward into future environmental studies and documents.

# Strategies to be evaluated

Strategies throughout the Madison metropolitan area will be developed and evaluated to see how they address issues identified on the Madison Beltline. These strategies will include transit, non motorized travel, as well as other roadway corridors, including those north and south of the Beltline. Strategies that show promise will be advanced into a National Environmental Policy Act (NEPA) study, such as an environmental impact statement.




Strategy(ies) that move forward into NEPA

How well does the strategy address issues on the Beltline?

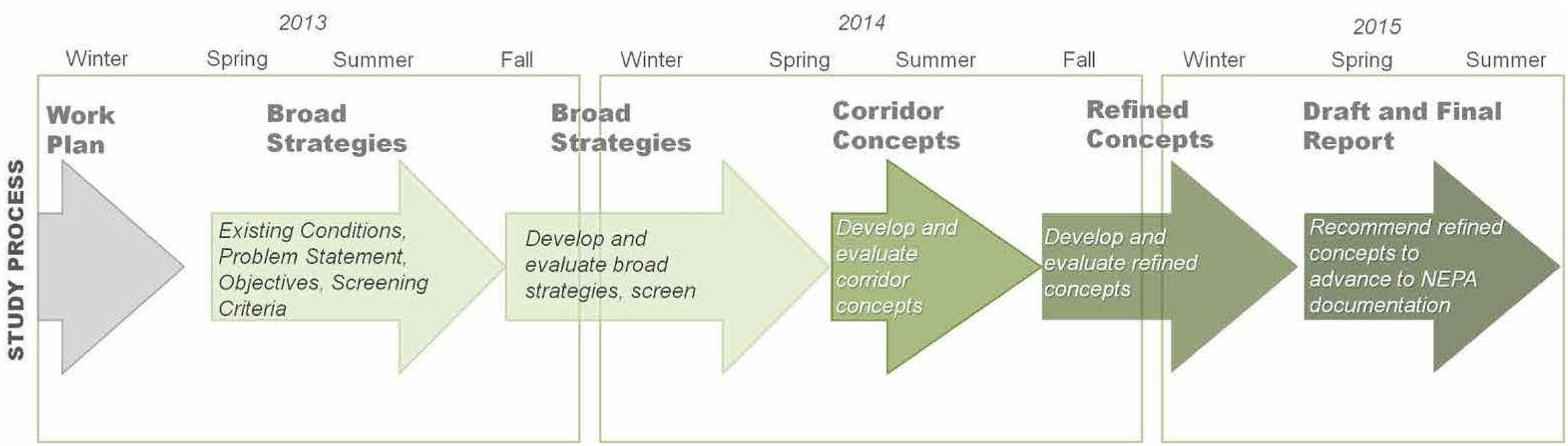
**Environmental Impact Statement**

# PEL study process and schedule

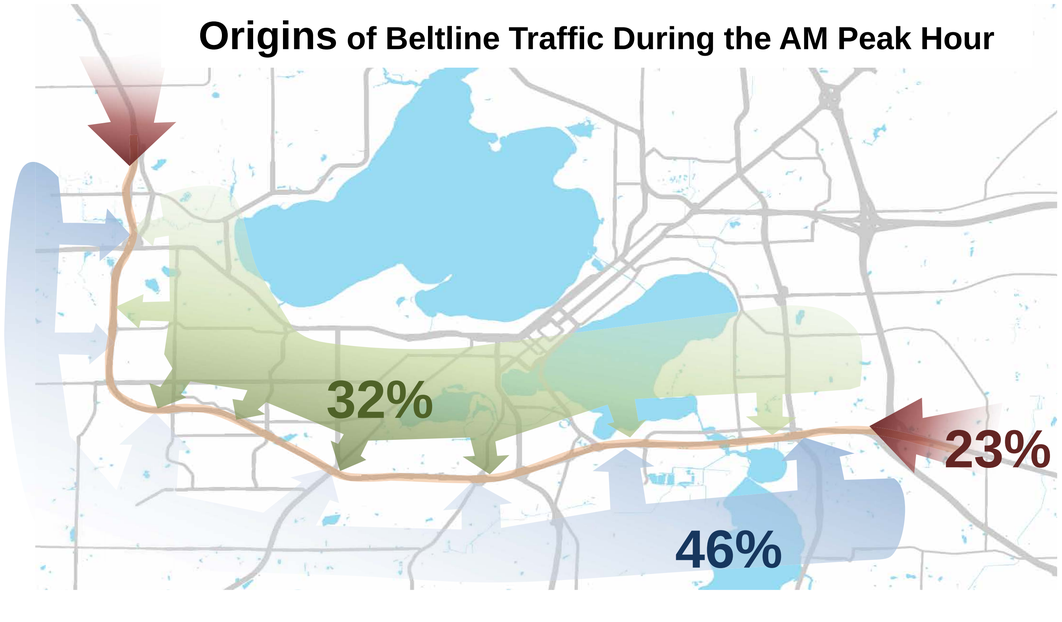
**The PEL study identifies concepts for future analysis**

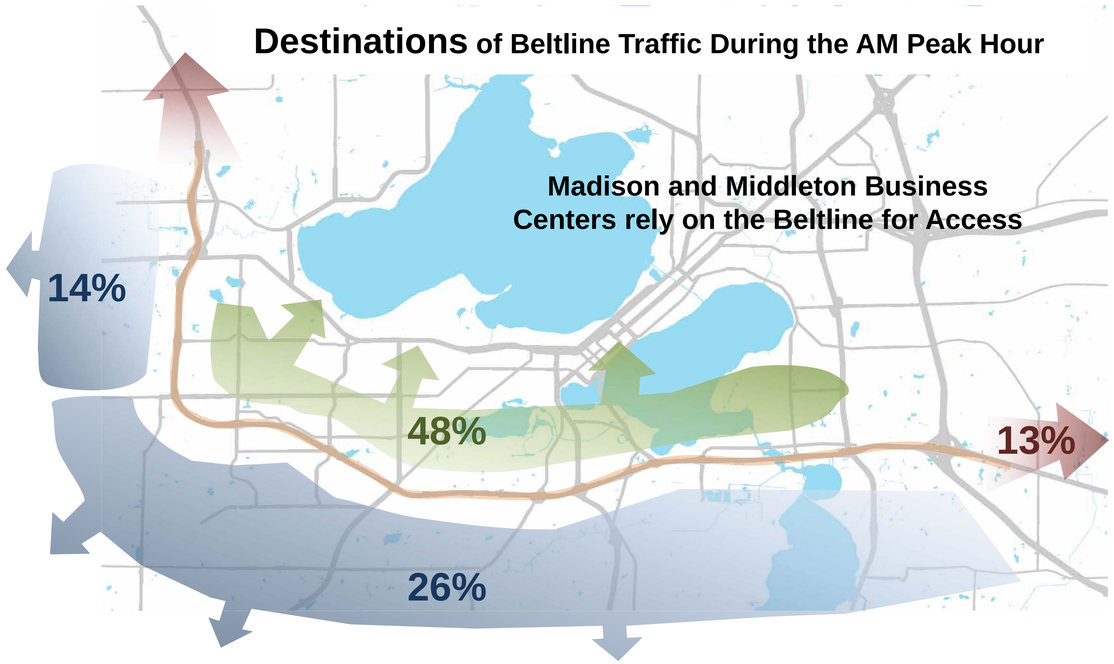
The Planning and Environment Linkages (PEL) study process is expected to last about 2 years. It will start by developing a Problem Statement and Screening Criteria and evaluating Broad Strategies throughout the Madison metropolitan area. Strategies that show promise for solving issues on the Beltline will be advanced into the Corridor Concepts stage which focuses on specific corridor(s) or strategy(ies). Corridor Concepts will be refined. Those that show promise in addressing Beltline objectives will be evaluated, and then recommended for advancement into a National Environmental Policy Act (NEPA) study, such as an environmental impact statement. The public will have extensive opportunity to comment both in this PEL study, and in future environmental studies associated with NEPA.

Strategies advanced from this study are not likely to be implemented until at least the year 2020.



# Traffic origins and destinations




## Comprehensive study

Understanding the origin and destination of Beltline traffic helps WisDOT understand how the Beltline serves local regional travel patterns. This information is valuable in understanding the Beltline's role in local regional travel, and in developing improvement strategies.

In 2012 the Wisconsin Department of Transportation initiated the most comprehensive origin and destination studies ever conducted in the state of Wisconsin. The study included time-lapse photography from 4 helicopters hovering over the Beltline during the morning and evening rush hours. The study also used Bluetooth® technology to understand county-wide travel patterns.

## Beltline serves central business districts

The adjacent graphics show some of the results of the origin and destination study. During the morning rush hour, most of Beltline traffic originates from outside the Beltline yet over 60 percent is destined for central Madison or to the Middleton business district. A relatively minor portion of Beltline traffic arrives or exits at the end points.