



# MADISON BELTLINE OPERATIONAL NEEDS ASSESSMENT (MIDDLETON – CAMBRIDGE ROAD) DANE COUNTY

## Client

WisDOT, SW Region  
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## Earth Tech

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## Project ID's

5300-02-09

## Project Start

Summer/Fall 2006

## Project Completion

Summer/Fall 2007

## DAAR Project Cost

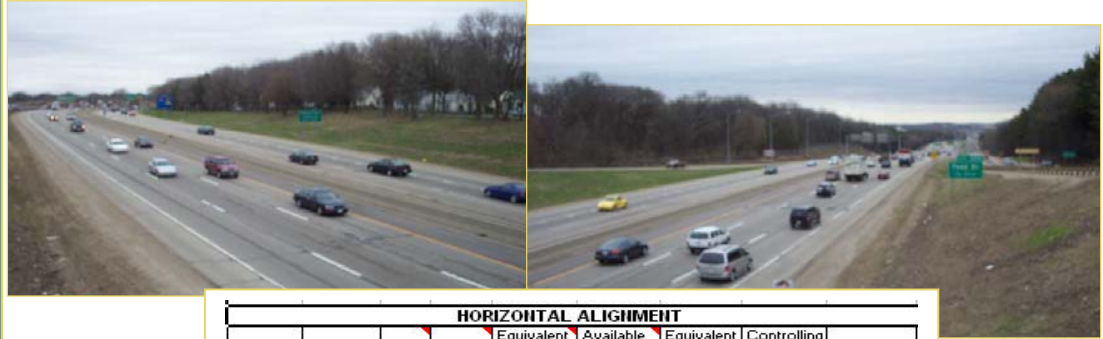
\$378,000

## Project Manager

Karen Weiss, P.E.

## Team Members

Todd Wescott  
Ruth Knight, E.I.T.



HORIZONTAL ALIGNMENT								
Curve Radius	Deficient Radius?	SE Req'd	Existing SE	Equivalent V using e max 6%	Available Horizontal SSD	Equivalent Speed (SSD)	Controlling Speed (MPH)	OA Rating
17188.78	No	2.0	-2.0	65	OK	NA	65	Accept
13750.99	No	2.0	-2.0	70	OK	NA	70	Poor
17188.73	No	2.0	-2.0	70	OK	NA	70	Poor
3274.04	Yes	4.0	4.0	55	OK	NA	55	Accept
3437.75	No	3.9	4.0	60	OK	NA	60	Good
1909.86	No	5.5	5.5	60	OK	NA	60	Good
1637.02	Yes	5.9	5.8	55	OK	NA	55	Accept
5729.58	No	2.7	3.0	65	OK	NA	65	Accept
11453.16	No	-2.0	-2.0	60	OK	NA	60	Good
11453.16	No	-2.0	-2.0	60	OK	NA	60	Good

DAAR provided services to Earth Tech on this project. The purpose of the project is to identify areas along the Madison Beltline for operational and safety improvements. There are 18 existing interchanges along this corridor. Short-term improvements will be recommended to address critical safety problems and to maximize the utility and capacity of the existing infrastructure.

DAAR performed data collection for the project, including recreating the alignment for the entire corridor from USH 14 in Middleton to CTH N east of Interstate 39/90/94. Geometric and other deficiencies were identified using as-built plans, pavement inspection reports, bridge information from the Highway Structures Inventory System (HSI), other pertinent documents and field reviews.

### Project Deliverables:

- Complete inventory of existing Madison Beltline roadway, interchanges and bridges
- Deficiency analysis of Beltline geometry, cross-sectional elements, pavements, bridges and drainage.
- Crash Analysis
- Turning Movement Counts
- Identification of short-term improvements to address corridor deficiencies
- Conceptual plan development for short-term roadway improvements
- Conceptual plan development for short-term interchange improvements

