

The Otsego County Roundabout

Intersection of Old-27 and Livingston Boulevard

(Located just north of the City of Gaylord)

Presented by:

Mike Roper

Managing Director

Otsego County Road Commission

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Gaylord High School
1996

M-TEC and
University Center
2001



High Impact Crash, 2004
Old-27 and Livingston
Boulevard Intersection

Crashes

- 1994-2003 data; twenty crashes at this intersection
- Four crashes resulting in injuries (20%)
- Sixteen crashes, property damage only
- Cost per crash:
 - Average \$66,000 per non-incapacitating injury*
 - Average \$2,700 per property damage only*

*SEMCOG Traffic Safety Manual, Third Edition

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Before....



Complaints Regarding Safety & Traffic Flow

- Bus drivers
- Parents
- Business owners
- Letters from citizens

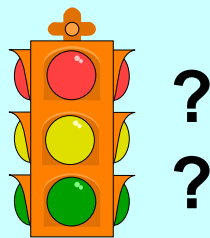


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Road Commission was asked to install a traffic signal

- However, funding was declined.
 - Not warranted
 - Most movements are left turns



Meeting: December 20, 2004

- School officials, Road Commission, Sheriff, University Center, citizen, DLZ
 - Do nothing
 - Install traffic signal
 - Develop new road
 - Build a roundabout
 - Combination of above



Unanimous Decision (11 of 11): Roundabout is Preferred Solution

- Comfortable with roundabout concept
- Fewer crashes, fewer injuries, fatalities unlikely
- Head on and left turn conflicts eliminated
- No waiting at red lights
- Passive operations; less expensive to maintain
- Steady low-speed traffic flow, all approaches
- Safer for pedestrians and bicyclists
- Will maintain capacity with future growth
- Construction is a one-time expense
- Progressive solution to potential long-term problem

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Crashes

- Costs per crash:
 - Average \$66,000 per non-incapacitating injury*
 - Average \$2,700 per property damage only*
- Roundabouts reduce overall crashes by 39%**
- Reduce crashes resulting in injury by 76%**
- Up to 90% reduction in fatalities or severe injury crashes**

*SEMCOG Traffic Safety Manual, Third Edition

**Insurance Institute for Traffic Safety, 2000

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Traffic

- Peak hour traffic in the AM, 980 vehicles
- Projections show increase to 1,470 vehicles by 2025
- Projections show average AM delay of 7.3 seconds in 2025
- Projections show average PM delay of 4.5 seconds in 2025

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Applied for Safety Funds, March 2005 Safety Funds Awarded July 2005: \$200,000

- Preliminary estimate for construction: \$320,000,
(Road Commission had \$60,000)
- Explored possible financial partners: University Center, Livingston Twp, Otsego County, Gaylord Community Schools



Partners on the Gaylord Roundabout

- Livingston Township
- Otsego County Road Commission
- University Center
- County of Otsego
- Federal Safety Funds



Total estimated cost \$ 325,000

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Design Period October '05 to February '06

- Road Commission visited with local businesses, December 2005
- Planned for 2 week road closure; businesses could only cope with 1 week closure



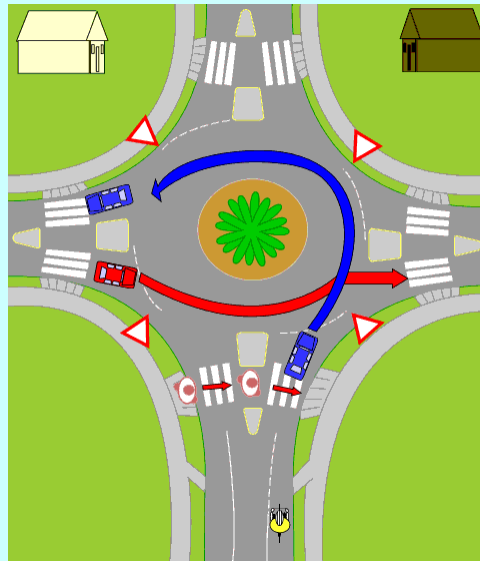
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Community Training Sessions

- Gaylord Sophomores
- Gaylord Juniors
- Alpine Center Employees
- Public (at Corwith Township Hall)
- Road Commission Employees
- Rotary
- Senior Center (no response)

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Doesn't this look easy!



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General Rules for driving a roundabout

- Slow Down
- Watch for Traffic Signs
- Yield to Pedestrians and Bicyclists as you enter and exit roundabout
- Look to the left for Traffic
- Always Yield to traffic in the circle
- Enter when it is safe
- Keep your speed low within the roundabout
- Exit to your destination

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Roundabout completed July 2006

Final Costs

- Engineers' estimate of construction cost: \$265,962
- MDOT letting in May, 2006: Low bidder, Eastlund Concrete Construction; \$242,045
- Final Construction Cost: \$221,465 (9% under bid!)
- Design cost: \$41,600



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Design Process is Somewhat Flexible

- Important elements will adhere to certain specifications
- Roundabout may be positioned to minimize roadwork and maximize the use of existing pavement
- Existing pavement can be painted rather than removed

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Motorists' First Reaction

- Drivers stopping in circulating road to allow yielding motorists to enter
- Drivers not yielding to traffic in roundabout
- Drivers stopping at yield sign when no other vehicles present
- Drivers not properly slowing down before entry (skid marks)
- After initial reaction, most are now driving properly

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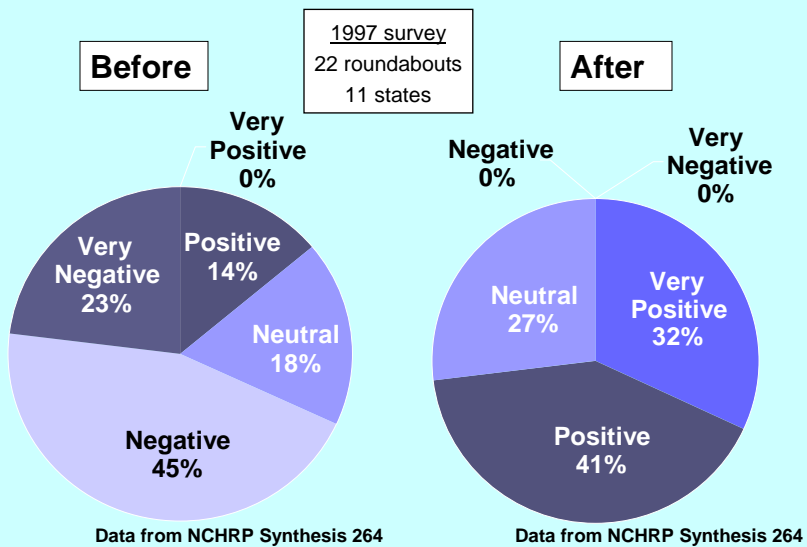
Most Comments Positive to Very Positive!

- “Awesome!”
- “Great Idea!”
- “Provides a constant flow of traffic”
- “Good move; 200% safer!”
- “You did the right thing!”



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180 Degree Change



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Maintenance Issues

- Snow plowing
- Mowing / landscaping
- Stormwater runoff

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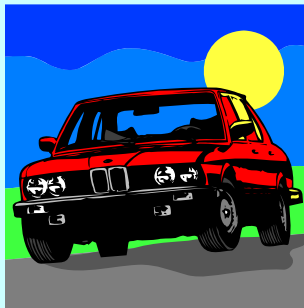
Questions

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Drive Safely

Have a Great Day!



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