County of Renfrew

County Road 71 (Matawatchan Road), from Highway 41 to County Road 65 (Centennial Lake Road) Environmental Assessment Study

Public Open House No. 1

December 3, 2009

Presentation Outline

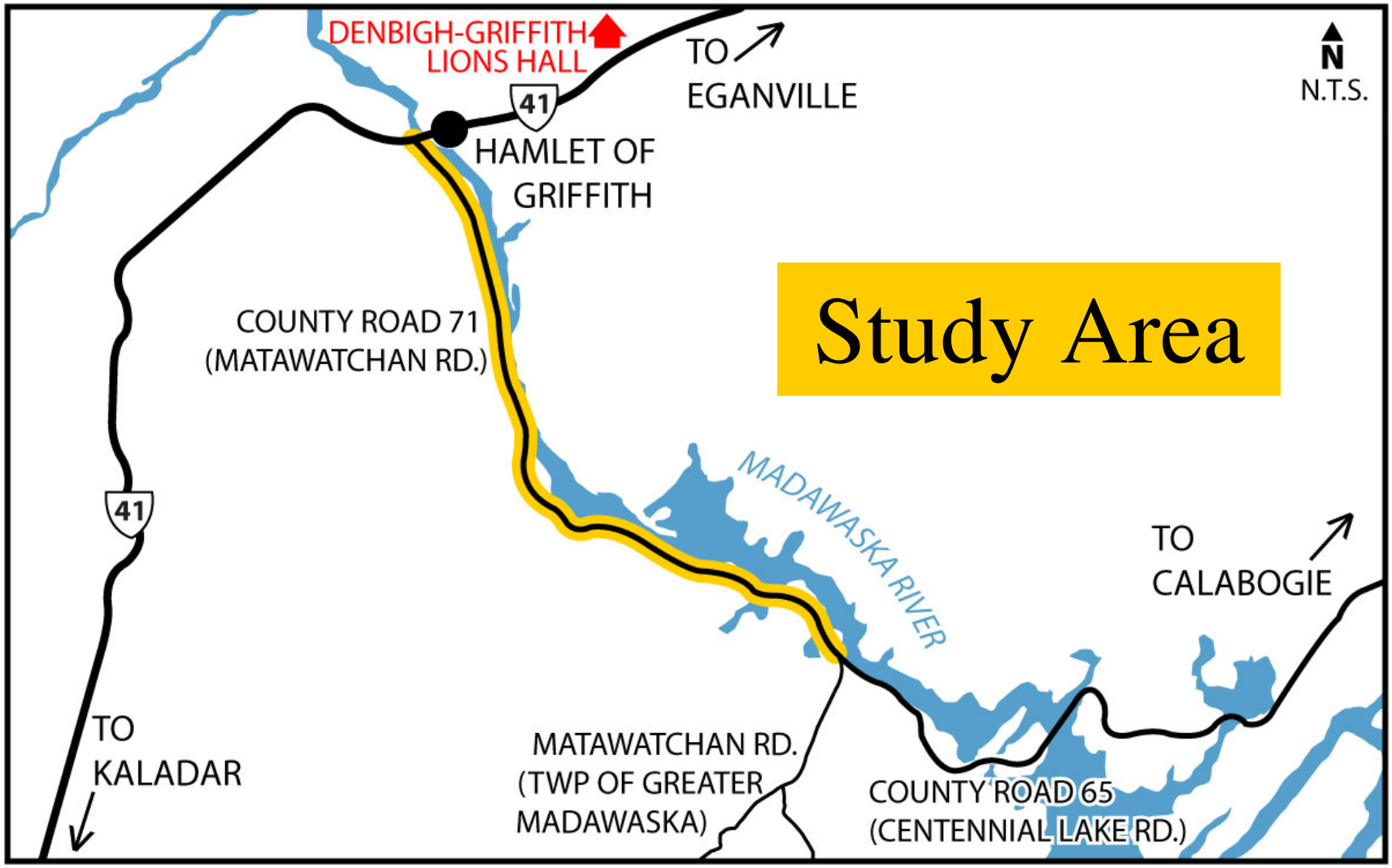
- Purpose
- Introduction
- Study Area
- Key Issues and Existing Conditions
- EA Process
- Planning Solutions
- Transportation and Geometric Review
- Roadway Alternatives and Implementation Strategy
- Costs
- Next Steps

Purpose

- To present the Matawatchan Road transportation issues and needs, alternative solutions, and preliminary design alternatives
- To receive your comments and input on the list of needs and issues and prioritization of the roadway design and construction contracts

Introduction

- County Road 71 is a 2-lane rural road, posted speed of 80 km/h
- County Road system generally provides higher operating speeds and accommodates uses such as emergency vehicles and commercial vehicles.
- Roadway design typically reflects the higher speeds and usage needs including safer cross sectional elements (i.e. lane width, shoulder width)
- Portions of the roadway have been reconstructed in 2006 and 2007 to current County standards.
- For the remaining 6 km of County roadway, pavement needs, narrow roadway width, roadway safety (curves, steep hills, stopping sight distance) need to be addressed and prioritized


DENBIGH-GRIFFITH
LIONS HALL
TO
EGANVILLE
N
N.T.S.
41
HAMLET OF
GRIFFITH
COUNTY ROAD 71
(MATAWATCHAN RD.)
Study Area
MADAWASKA RIVER
41
TO
CALABOGIE
TO
KALADAR
MATAWATCHAN RD.
(TWP OF GREATER
MADAWASKA)
COUNTY ROAD 65
(CENTENNIAL LAKE RD.)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Key Issues and Constraints

- Narrow existing right-of-way
- Proximity to the Madawaska River
- Drainage
- Rideability/pavement
- Skewed intersections
- Roadway users, accommodate pedestrians and cyclists
- Utilities
- Property impacts
- Operating speeds
- Safety (curves, shoulder width)
- Design consistency
- Cost of improvements
- Prioritization/staging of improvements
- Long-term planning

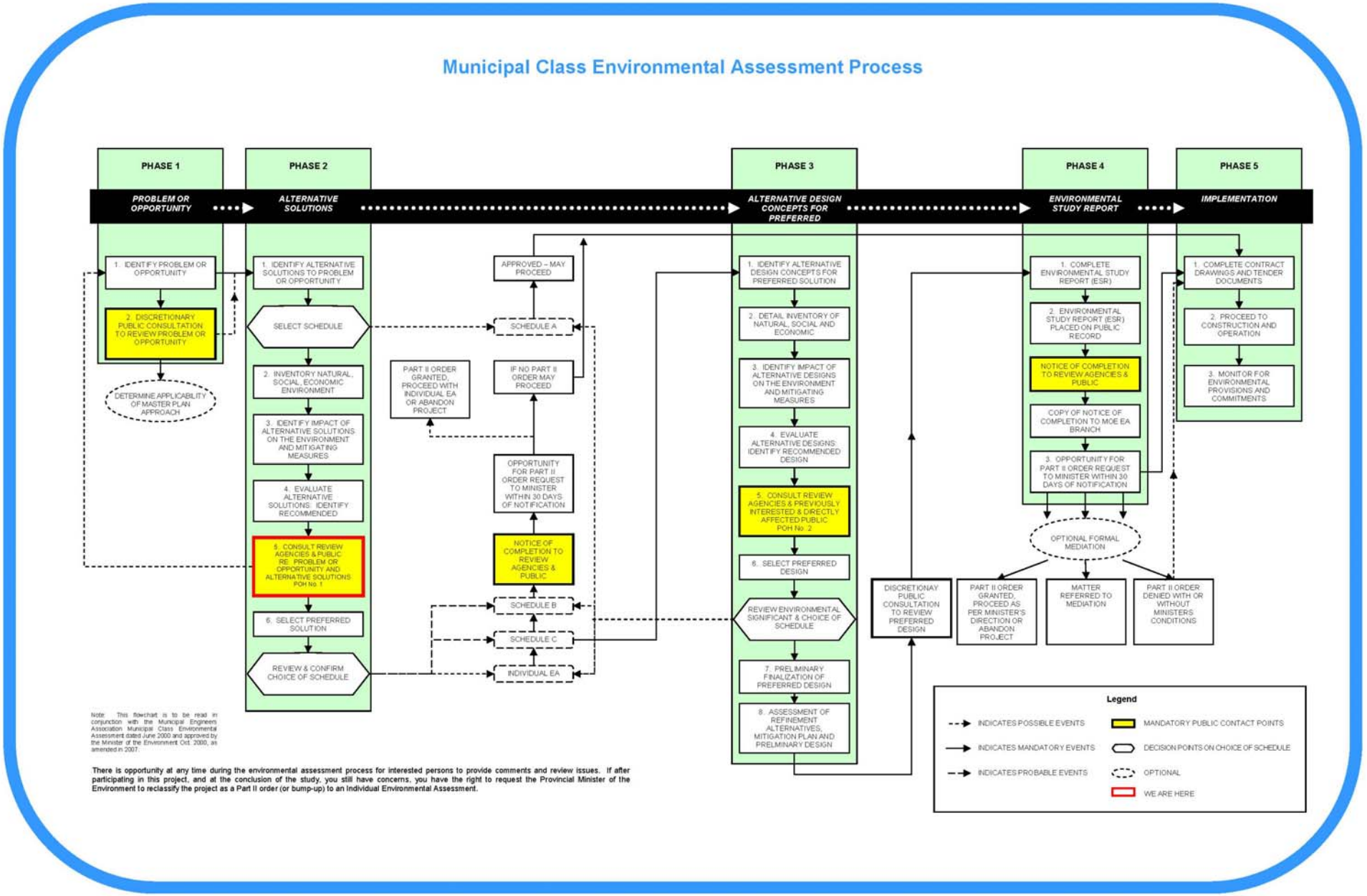
Existing Conditions

Typical conditions illustrating poor pavement condition, lack of shoulders, roadside hazards/visibility (i.e. trees)

Newly constructed section (2007)
- Wider platform (lane and shoulders)
- Good visibility (no hazards)

Photo illustrating sharp horizontal and vertical curves, reduced visibility, and adjacent rock outcrop

Class EA Process



Planning Solutions – How do we address the problem?

Do Nothing	Pavement Rehabilitation	Improve/Realign County Road 71 with minor operational improvements	Rehabilitate/Replace Bridge/culverts
Maintains the current roadway and bridge alignments. Does not implement any improvements. Does not address identified roadway and structural (i.e. culverts) deficiencies or plan for future travel demand.	Rehabilitate the existing County Road 71 pavement to improve its operation and increase safety.	Improve/realign existing County Road 71 to improve its operation and increase safety.	Rehabilitate/replace bridge and/or culverts to improve the operation and safety along County Road 71.
✗	✓	✓	✓
DO NOT CARRY FORWARD (Does not address the identified safety issues associated with the road deterioration)	**CARRY FORWARD Does not, on its own, address the identified safety issues such as visibility, clearzone (rock, trees), lack of shoulders but pavement rehabilitation/reconstruction will be required as part of a basket of solutions**	**CARRY FORWARD as part of a basket of solutions**	**CARRY FORWARD as part of a basket of solutions**

Transportation Review

- Traffic volumes generally decrease from north to south
- Summer traffic volumes are the highest
- Peak 2-way volume (Sat Aug 2, 2008) was 853, 2.1 km south of Highway 41 and 795 at 8.3 km south of Highway 41
- Average Annual Daily Traffic (AADT) 520 vehicles per day in 2002, AADT 442 vehicles per day in 2006
- Volumes suggest that traffic is through traffic
- 5 reported collisions over the last 8 years
- 3 collisions attributed to wild animals
- No fatal collisions

Existing Geometrics

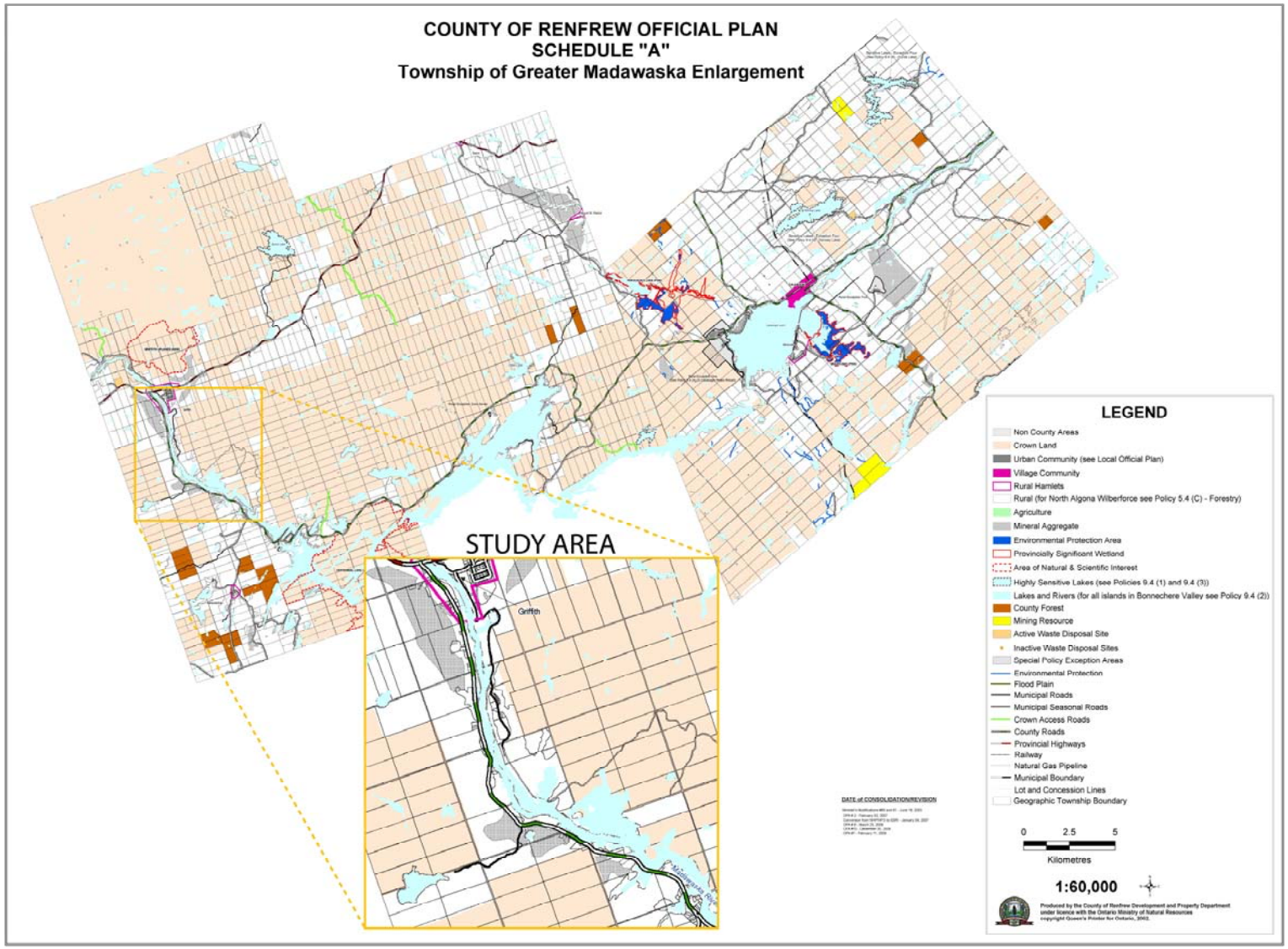
	Existing	Typical County Road
Lane width	• 3.0 m	• 3.25 m minimum • 3.5 m desirable
Shoulder width	• Varies (0.5 m to 2.0m)	• 1.5 m minimum • 2.0 m desirable • Consideration of paved shoulders on curves
Clear zone	• Varies (0.5 m to 4.0 m)	• 4.0 m minimum
Guiderail	• Required throughout the majority of the study area but not present	• Guiderail required on shoulders
Vertical curves 19 Sag curves	• Majority designed to less than 65 km/h	• Design to 80 km/h minimum (rural area)
Vertical curves 20 Crest curves	• 8 less than DS=50 km/h	• Design to 80 km/h minimum (rural area)
22 Horizontal curves	• 5 curves do not meet the minimum 250 m radius	• 250 m minimum radius for 80 km/h design
Surface Type	• Surface treatment	• Double lift asphalt (based on AADT traffic volumes)

County Roadway Design Standards

Design Standard	Location	Desirable standard	Minimum standard
Design Speed	• Rural	• 90 km/h	• 80 km/h
	• Urban	• 80 km/h	• 50 km/h
Lane width		• 3.5 m	• 3.25 m
Shoulder width		• 2.0 m	• 1.5 m
Drainage/ditching		• 0.5 m ditch (below subgrade)	• 0.3 m ditch (below subgrade)
Curves		• Design dependent on design speed. • Reduce design speed where required due to constraints, and provide warning signeage.	
Right-of-way width		• 26 m	• 20 m

• Shoulder type: AADT traffic volume less than 400 = double surface treatment, AADT of 400 to 999 vehicles, 50 mm hot mix asphalt

Existing Land Uses



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Improvement Alternatives

- Rehabilitate the existing pavement with a wider lane width of 3.25m and 1.5 m gravel shoulders
- Rehabilitate the existing pavement with a wider lane width of 3.25m, 1.5 m gravel shoulders – paved shoulders on curves
- Rehabilitate the existing pavement with a wider lane width of 3.25m, 1.5 m gravel shoulders – paved shoulders on curves, improvements to deficient horizontal curves
- Rehabilitate the existing pavement with a wider lane width of 3.25m, 1.5 m gravel shoulders – paved shoulders on curves, improvements to deficient horizontal curves, improvements to crest and sag curves
- Examination of drainage (culvert) improvements can also be considered for each of the above 4 options.

County of Renfrew Roadway Evaluation Criteria

- Rehabilitation strategies and priorities are based on the following components: Pavement Condition, Riding Comfort, Traffic Volume and Composition, Geometrics/Safety and Roadway Design Class.

Implementation Strategies

- Reconstruction of all needs based on an 80 km/h design speed
- Reconstruction of all needs based on a reduced design speed of 60 km/h
- Identify longer term plan and implement select projects as funding becomes available. For the remaining sections, the County will protect property through land use planning.

Improvement Costs

County's 5-yr capital program for Matawatchan Road

	2010	2011	2012	2013	2014	TOTAL
Environmental Assessment						0
Engineering	7,000	7,000		7,000	7,000	28,000
Property	6,500	6,500		6,500	6,500	26,000
Utilities	10,000	20,000		20,000	10,000	60,000
Construction	626,500	523,500		610,500	431,500	2,192,000
Misc./Contingency		143,000		56,000	245,000	444,000
TOTAL:	**$650,000**	**$700,000**	**0**	**$700,000**	**$700,000**	**$2,750,000**

GENIVAR's preliminary costs to reconstruct CR 71 using 3.5 m lane width and 1.75 m gravel shoulders are as follow:

Project 1: North end, 2.4 km, reconstruction generally on existing alignment, with wider platform (lane and shoulder): $1.0 Million

Project 2: South end, 3.3 km, reconstruction on existing alignment with wider platform (lane and shoulder), spot improvements including realignment at 4 rock cuts: $1.9 Million

Conclusions

- Based on the County's 5-yr capital program for Matawatchan Road, the improvements needed can be constructed if they are staged over the next 5 years
- The roadway reconstruction improvements will include horizontal and vertical improvements, removal of roadside hazards, better visibility at driveways/entrances
- Which section of the roadway should be constructed first?

Next Steps

- Review all Comments
- Confirm Alternative Planning Solutions
- Complete a project prioritization list
- Present the study findings to the County of Renfrew

In 2010, the County will continue with the planning and design of the highest priority project(s). At this time, subsequent EA studies will be completed to assess the transportation and environmental impacts (i.e. wetlands, fisheries, archaeological potential, property impacts) associated with each project.

How can you remain involved?

- Providing a written comment sheet
- Contacting the County of Renfrew or consultant (GENIVAR) at any time during the study
- Regular project updates can be obtained through the Environmental Studies link on the County's public Works and Engineering web page at http://www.countyofrenfrew.on.ca/publicworks.htm