



# Highway 7&8 Transportation Corridor Planning and Class EA Study

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PIC #3B Presentation

July 21, 2010





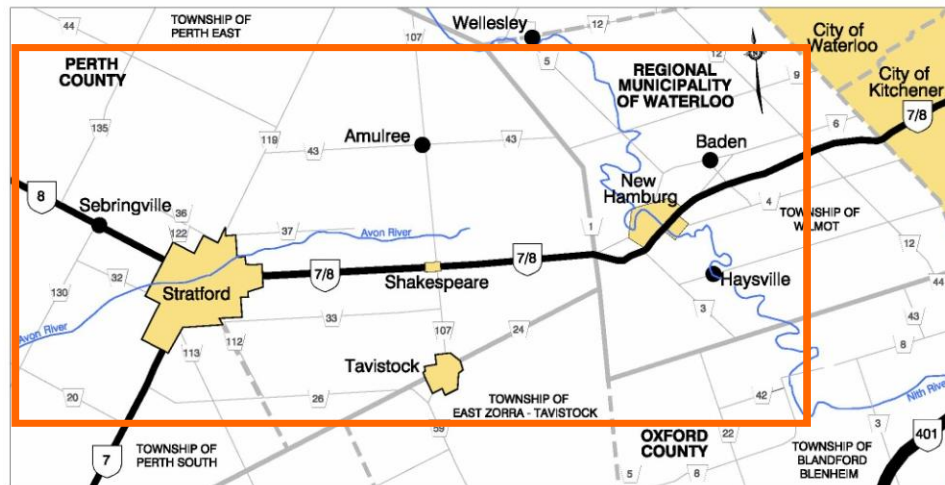
# Today's Presentation

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- Provide brief overview of:
  - Study purpose
  - Recently completed work
  - Purpose of PIC #3B
  - Material available for review
  - Next steps after PIC #3B
- Introduce study team members

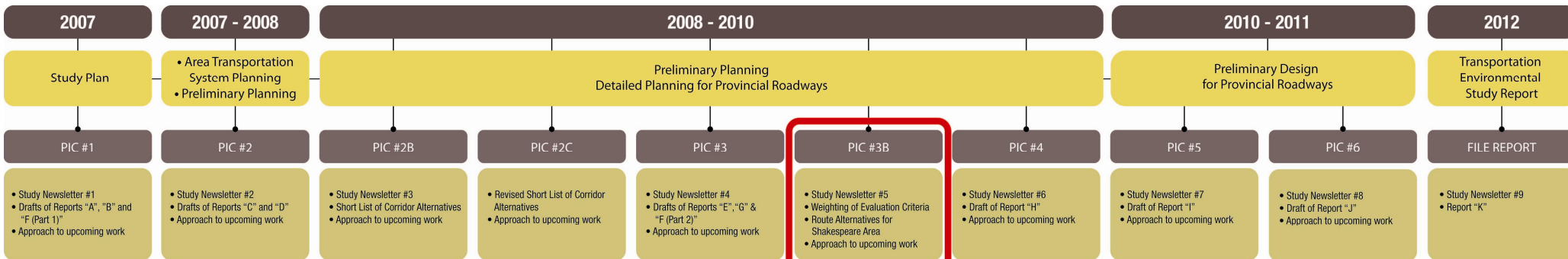
# Study Purpose

- Develop a plan that addresses:
  - Capacity, operation and safety needs of Hwy 7&8 between Stratford and the New Hamburg area and on Hwy 7&8 through the urban centres (Stratford, Shakespeare and New Hamburg) for the movement of people and goods
    - 2031 Planning Horizon
    - Analysis Area shown below



- Prepare a preliminary design for provincial roadway components of recommended plan

# Study Update



WE ARE HERE

- PIC #3 held in July / August 2009
  - Evaluation Results for Short List of Corridor Alternatives
  - Preferred Corridor
  - Environmental Conditions and Constraints within Preferred Corridor
  - Widening / New Route Alternatives for Preferred Corridor
- Widened Highway 7&8 through Shakespeare was part of preferred corridor presented for public review in summer of 2009
- In response to comments received, revisiting alignment alternatives in Shakespeare Area



# Revisiting Alignment Alternatives in Shakespeare Area

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- Study team is conducting a more detailed review of route alternatives in the Shakespeare area
  - Re-examining alignment alternatives on “route” rather than “corridor” basis
    - Alignments for routes are “lines” rather than “bands” on a map
    - Evaluation indicators for routes are at a higher level of detail that better addresses concerns expressed
  - Two Shakespeare Community Workshops held in March 2010
    - Results documented in Shakespeare Community Workshops Summary Document which is posted on the study website and is available for review at this PIC
  - Input received at workshops used to develop a broader range of Shakespeare area route alternatives and refined sub-factors, criteria and indicators for their evaluation
  - Additional PIC (today’s PIC) being held to obtain input on proposed route alternatives for Shakespeare area and evaluation sub-factors, criteria and indicators to be used for route selection

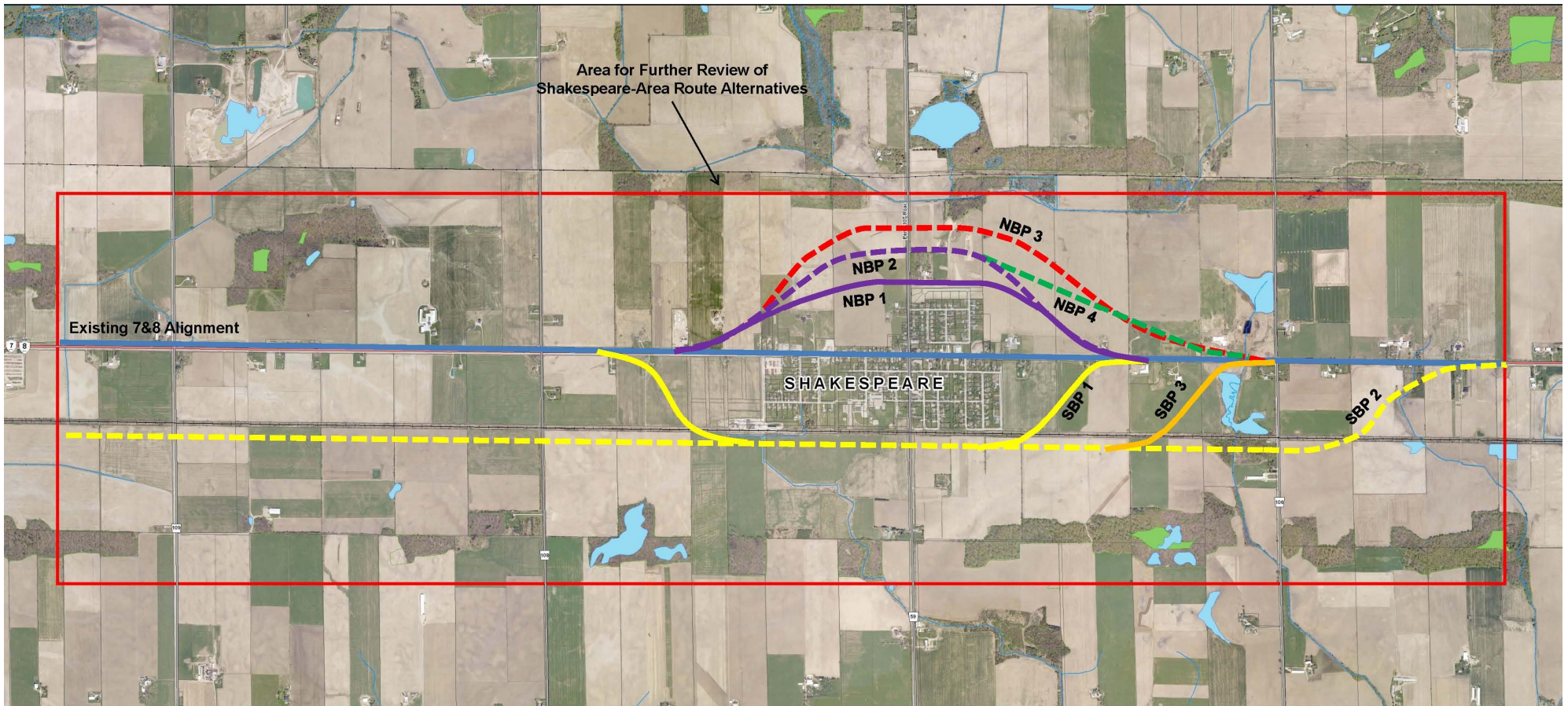


# Purpose of PIC #3B

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- Present and obtain information and input on the following key elements:
  - Proposed highway route alternatives for Shakespeare area
  - Refined evaluation sub-factors, criteria and indicators for route selection for entire study area
  - Weighting of evaluation factors, sub-factors and criteria for route selection for entire study area

# Proposed Route Alternatives for Shakespeare Area



Proposed Route Alternatives for Shakespeare Area

Northern Bypass (NBP)

- 1
- 2
- 3
- 4

Southern Bypass (SBP)

- 1
- 2
- 3

Existing 7&8 Alignment





# Connection Options for Shakespeare By-Pass Alignments

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- Range of connection options will be considered for Shakespeare By-Pass alignment
  - Connection at Perth Road 107
  - Connection at tie-in point west of Shakespeare
  - Connection at tie-in point east of Shakespeare
  - Combinations of the above
- Connection options will be developed in more detail following selection of preferred alignment



# Evaluation Criteria / Indicators

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- Widening / route alternatives will be evaluated using broad range of factors, sub-factors, criteria and indicators
  - 4 Factor Groups
    - Natural environment
    - Land use / socio-economic environment
    - Cultural environment
    - Transportation
  - 23 Sub-Factors
  - 69 Criteria
  - Multiple Indicators for each criterion



# Evaluation Criteria / Indicators

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- Refinements have been made to criteria and indicators since study inception based on stakeholder input
  - New / modified criteria and indicators for following sub-factors:
    - Land use / community (e.g. parking, community cohesion, pedestrian movements, critical mass of businesses, etc.)
    - Noise sensitive areas (including noise sensitive receivers)
    - Agriculture (e.g. farm infrastructure, operations, integrated agricultural business units, etc.)
    - Air quality (consideration of number of sensitive receptors)
    - Safety (ease and safety of pedestrian / cyclist movement)
    - Mobility and accessibility (mobility of pedestrians, cyclists, etc.)



# Evaluation Methods

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- ‘Reasoned Argument (or Trade-off)’ method will be primary tool used to identify preferred alternative
  - Presents a clear and thorough discussion of the trade offs between various evaluation factors, sub-factors, criteria and indicators
- ‘Arithmetic (weighting-scoring)’ method will be secondary tool used to verify results of reasoned argument method
  - Allows comparison of the alternatives based on a numerical scaling with weights (level of importance) assigned to the evaluation factors, sub-factors and criteria
- Evaluation results from both methods will be presented for public review and comment at PIC #4

# Weighting of Evaluation Criteria

## Instruction Sheet

## Weighting Sheets

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**INSTRUCTIONS FOR COMPLETING WEIGHTING SHEETS**

The study team would like your input on the weighting (level of importance) of evaluation factors, sub-factors and criteria for route selection. Please follow the step by step instructions below to complete the attached Weighting Sheets. For more information about each criterion, please refer to the attached Evaluation Criteria and Indicators Reference Sheet.

- Section 1: Enter your name and address.
- Section 2: Check the appropriate box for the weighting scenario you are providing. Different weights will be used for the built-up areas (e.g. Stratford, Shakespeare and New Hamburg) and the rural areas. You must submit two copies of the weighting sheets if you want to provide weights for both the built-up areas and the rural areas.
- Section 3: In the "Factor Weights" column, enter a weight (number between 0 and 100) for each factor (i.e. in each non-shaded box in this column). The assigned weights for the four applicable factors must equal 100. For example:
 

Factor	Factor Weight
1. Natural Environmental Factors	25
2. Land Use / Socio-Economic Factors	25
3. Cultural Environmental Factors	25
5. Transportation Factors	25
<b>Total</b>	<b>100</b>

Please ensure you have entered a weight for all factors.

- Optional: If you have provided input on the factor weights, you may also provide input on the sub-factor weights. In the "Sub-Factor Weights" column, enter a weight (number between 0 and 100) for each sub-factor (i.e. in each non-shaded box in this column). The sub-factor weights for each factor area must equal 100. For example:
 

1. Natural Environmental Sub-Factors	Sub-Factor Weight
1.1 Fisheries and Aquatic Ecosystems	25
1.2 Terrestrial Ecosystems	25
1.3 Groundwater	25
1.4 Surface Water	25
<b>Total</b>	<b>100</b>

- Optional: If you wish to breakdown weights to this level of detail, please ensure you have entered a weight for all sub-factors.
 

3. Cultural Environmental Sub-Factors	Sub-Factor Weight
3.1 Cultural Heritage – Built Heritage and Cultural Landscapes	50
3.2 Cultural Heritage - Archaeology	50
<b>Total</b>	<b>100</b>

If you wish to breakdown weights to this level of detail, please ensure you have entered a weight for all sub-factors.

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- Optional: If you provided input on the sub-factor weights, you may also provide input on the criteria weights. In the "Criteria Weights" column, enter a weight (number between 0 and 100) for each criterion (i.e. in each non-shaded box in this column). The criteria weights for each sub-factor area must equal 100. For example:
 

1.1 Fisheries and Aquatic Ecosystems Criteria	Criteria Weight
1.1.1 Fish Habitat	50
1.1.2 Fish Community	50
<b>Total</b>	<b>100</b>

- Optional: If you wish to breakdown weights to this level of detail, please ensure you have entered a weight for all criteria.
 

1.2 Terrestrial Ecosystems Criteria	Criteria Weight
1.2.1 Wildlife	20
1.2.2 Wetlands	20
1.2.3 Forests	20
1.2.4 Vegetation	20
1.2.5 Designated / Special Areas	20
<b>Total</b>	<b>100</b>

If you wish to breakdown weights to this level of detail, please ensure you have entered a weight for all criteria.

- Submit your completed weighting sheets to the study team by **September 3, 2010**, using one of the following methods:
  - Mail to: Highway 7&8 Corridor Study c/o AECOM, 300 Water Street, Whiteby, ON L1N 9J2
  - Fax to: 905-688-0221
  - Put in comment box at PIC #3B on July 21.

The weighting sheets are also available on the study website at [www.7and8corridorsstudy.ca](http://www.7and8corridorsstudy.ca)

If you have questions about how to complete the weighting sheets, please contact the study team at 1-866-921-9268.

Thank you. Your input is appreciated.

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**Weighting Sheets for Route Evaluation (see Instruction Sheet)**

Section 1: Contact Information  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Section 2: Weighting Scenario  
This weighting scenario is for (check only one):  
 Built-up Area  Rural Area

Section 3: Weighting (For each column you complete, please enter a weight in every non-shaded box. Sub-factor weights can only be entered if factor weights have been completed. Criteria weights can only be entered if sub-factor weights are completed.)

Factor	Sub-Factor	Criteria	Factor Weights	Sub-Factor Weights	Criteria Weights
1. NATURAL ENVIRONMENTAL FACTORS	1.1 Fisheries and Aquatic Ecosystems	1.1.1 Fish Habitat			
		1.1.2 Fish Community			
		1.2 Terrestrial Ecosystems			
		1.2.1 Wildlife			
	1.2.2 Wetlands				
	1.2.3 Forests				
	1.2.4 Vegetation				
	1.2.5 Designated/Special Areas (such as world heritage reserves, heritage parks, SPA, EIPA, ADB, environmental sensitive areas, national parks, provincial parks, conservation areas, etc.)				
	1.3 Groundwater	1.3.1 Areas of Groundwater Recharge and Discharge			
		1.3.2 Groundwater Source Areas and Inflow Protection Areas			
		1.3.3 Large Volume Wells			
		1.3.4 Areas of Use			
	1.3.5 Groundwater-Dependent Ecosystems (e.g. water table dependent)				
	1.3.6 Groundwater-Sensitive Ecosystems (e.g. groundwater-fed wetlands, coldwater streams)				
1.4 Surface Water	1.4.1 Watershed / Sub-Watershed Drainage Features/Patterns				
	1.4.2 Surface Water Quality and Quantity				

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**Weighting Sheets for Route Evaluation (see Instruction Sheet)**

Factor	Sub-Factor	Criteria	Factor Weights	Sub-Factor Weights	Criteria Weights
2. LAND USE / SOCIO-ECONOMIC FACTORS	2.1 Land Use Planning Policies, Goals, Objectives	2.1.1 First Nations Land Claims			
		2.1.2 Provincial/Federal land use planning/potential/development			
		2.1.3 Municipal (regional and local) land use planning/potential/development (Official Plan)			
	2.1.4 Development Objectives of Private Property Owners				
	2.2 Land Use / Community	2.2.1 First Nations Reserves			
		2.2.2 First Nations Reserved Lands			
		2.2.3 Urban and Rural Residential			
		2.2.4 Commercial/Industrial			
	2.2.5 Rural Areas and Attractions (e.g. museums, resorts, etc.)				
	2.2.6 Community Facilities - Institutions (e.g. hospitals, schools, places of worship, unique community features)				
2.2.7 Municipal Infrastructure and Public Service Facilities (e.g. sewage and water services, public emergency services, local offices)					
2.2.8 Distinctive Historic/Community Features					
2.3 Noise Sensitive Areas (NSAs) (residential areas and sensitive/recreational uses)	2.3.1 Highway Noise				
	2.3.2 Construction Noise				
2.4 Agriculture	2.4.1 Agriculture - Canada Land Inventory Class 1, 2, 3 Land				
	2.4.2 Agriculture - Farm Infrastructure				
2.4.3 Agriculture - Operations on Individual Farms					
2.4.4 Agriculture - Transportation Linkages between Integrated Agricultural Business Units					
2.5 Land Use / Resources	2.5.1 First Nations Treaty Rights or Use of Land and Resources for Traditional Purposes (e.g. hunting, fishing, harvesting of country foods, harvesting of medicinal plants)				
	2.5.2 Parks and Recreational Areas (e.g. multi-use recreational parks, conservation areas, municipal parks, public spaces, golf courses, trails, greenways and open water linkages)				
	2.5.3 Agriculture, Mineral Resources				
2.6 Major Utility Transmission Corridors (e.g. railroads, roads, gas, etc.)					

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**Weighting Sheets for Route Evaluation (see Instruction Sheet)**

Factor	Sub-Factor	Criteria	Factor Weights	Sub-Factor Weights	Criteria Weights
2. LAND USE / SOCIO-ECONOMIC FACTORS	2.1 Land Use Planning Policies, Goals, Objectives	2.1.1 First Nations Land Claims			
		2.1.2 Provincial/Federal land use planning/potential/development			
		2.1.3 Municipal (regional and local) land use planning/potential/development (Official Plan)			
		2.1.4 Development Objectives of Private Property Owners			
	2.2 Land Use / Community	2.2.1 First Nations Reserves			
		2.2.2 First Nations Reserved Lands			
		2.2.3 Urban and Rural Residential			
		2.2.4 Commercial/Industrial			
	2.2.5 Rural Areas and Attractions (e.g. museums, resorts, etc.)				
	2.2.6 Community Facilities - Institutions (e.g. hospitals, schools, places of worship, unique community features)				
	2.2.7 Municipal Infrastructure and Public Service Facilities (e.g. sewage and water services, public emergency services, local offices)				
	2.2.8 Distinctive Historic/Community Features				
	2.3 Noise Sensitive Areas (NSAs) (residential areas and sensitive/recreational uses)	2.3.1 Highway Noise			
		2.3.2 Construction Noise			
2.4 Agriculture	2.4.1 Agriculture - Canada Land Inventory Class 1, 2, 3 Land				
	2.4.2 Agriculture - Farm Infrastructure				
2.4.3 Agriculture - Operations on Individual Farms					
2.4.4 Agriculture - Transportation Linkages between Integrated Agricultural Business Units					
2.5 Land Use / Resources	2.5.1 First Nations Treaty Rights or Use of Land and Resources for Traditional Purposes (e.g. hunting, fishing, harvesting of country foods, harvesting of medicinal plants)				
	2.5.2 Parks and Recreational Areas (e.g. multi-use recreational parks, conservation areas, municipal parks, public spaces, golf courses, trails, greenways and open water linkages)				
	2.5.3 Agriculture, Mineral Resources				
2.6 Major Utility Transmission Corridors (e.g. railroads, roads, gas, etc.)					

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**Weighting Sheets for Route Evaluation (see Instruction Sheet)**

Factor	Sub-Factor	Criteria	Factor Weights	Sub-Factor Weights	Criteria Weights
5. TRANSPORTATION FACTORS	5.1 Area Transportation System Capacity and Efficiency	5.1.1 Federal/Provincial/Municipal transportation planning/potential/development			
		5.1.2 Efficient movement of people			
		5.1.3 Efficient movement of goods			
	5.2 Area Transportation System Reliability / Redundancy	5.2.1 Safety			
		5.2.2 Traffic Safety			
	5.2.3 Emergency Access				
	5.2.4 Positioning, Control and Synchronization Safety with the highway right-of-way				
	5.4 Mobility and Accessibility	5.4.1 Roadway Integration, Selection and Efficiency			
		5.4.2 Linkages to Population and Employment Centres			
	5.4.3 Recreation and Tourism Travel				
	5.4.4 Accommodate mobility of pedestrians, cyclists and e-scooters				
	5.5 Network Compatibility	5.5.1 Network Connectivity			
		5.5.2 Flexibility for Future Expansion			
	5.6 Engineering	5.6.1 Constructability			
5.6.2 Compliance with Design Criteria					
5.7 Traffic Operations	5.7.1 Construction Cost (excludes property costs and engineering costs)				

Thank you. Your input is appreciated.

An Evaluation Criteria and Indicators Reference Sheet is also available. It provides more detail about what each criterion considers.



# Next Steps

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- Respond to comments received through PIC #3B consultation process
- Finalize widening / new route alternatives for Shakespeare area
- Assess and evaluate widening / new route alternatives for entire study area
- Select Recommended Route for entire study area
- PIC #4 – Late Fall 2010
  - Present recommended route for entire study area



## Questions / Comments ?

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Thank you for your attention.  
Please direct your questions and  
comments to the Study Team  
members at the display boards.