

# OPEN HOUSE #2

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## **HIGHWAYS 2 and 3**

### **Fort Macleod Bypass**

#### Functional Planning Study

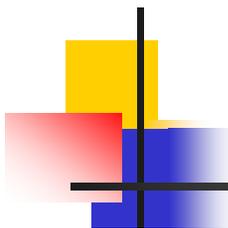
## **WELCOME**

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4 pm to 8 pm

July 3, 2008



Highways 2 & 3, Fort Macleod Bypass – Planning Study

# OPEN HOUSE FORMAT

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This Open House is an informal venue where area residents and businesses are provided with the opportunity to view the project information and discuss their interests and concerns with project staff.

Highways 2 & 3, Fort Macleod Bypass – Planning Study

# OPEN HOUSE PURPOSE

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## To Make the Community Aware of the:

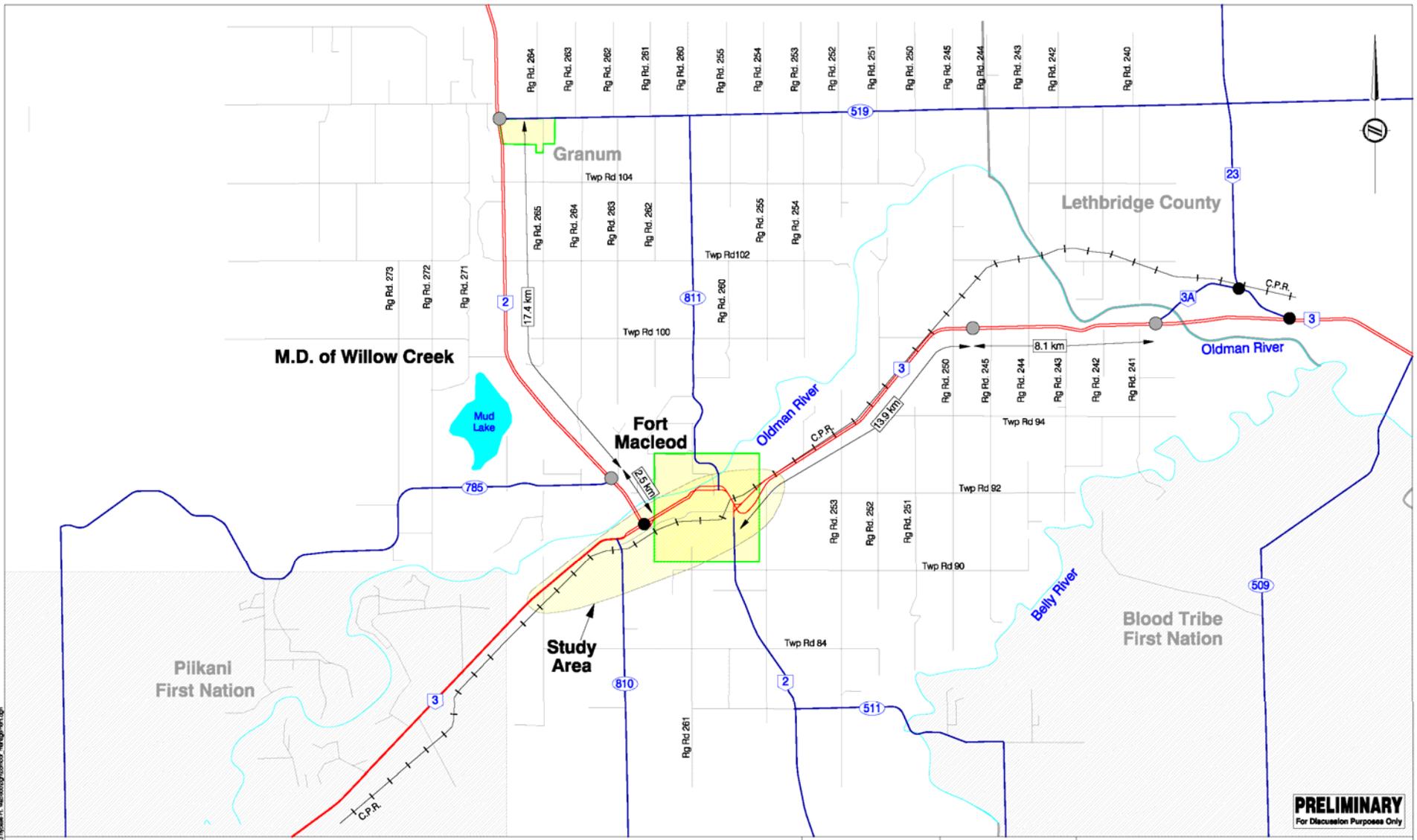
- Study Process and Project Requirements
- Technical Issues and Potential Impacts

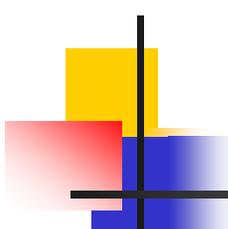
## To Invite Public Input Regarding:

- Development of a New Highway Corridor
- Preliminary Alignment Alternatives and Interchange Configurations

# Highways 2 & 3, Fort Macleod Bypass – Planning Study

## STUDY AREA





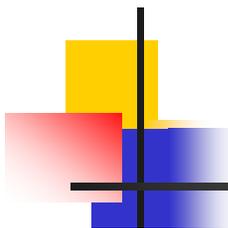
Highways 2 & 3, Fort Macleod Bypass – Planning Study

# STUDY PURPOSE

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## TO:

1. Identify the ultimate alignment and extent of a freeway standard Highway 3 bypass of Fort Macleod;
2. Establish a free-flow connection with Highway 2 North; and
3. Maintain access to Fort Macleod.



## Highways 2 & 3, Fort Macleod Bypass – Planning Study

# STUDY PROCESS

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1. Data Collection
2. Open House #1 – Information Gathering
3. Develop Alternative Highway Alignments
4. **Open House #2 – Present Alternatives, including a Preferred Plan**
5. Modify and Confirm a Preferred Plan
6. Open House #3 – Present a Recommended Plan
7. Complete Report
8. Presentation to the Town and M.D. Councils
9. Plan Approval by the Province

## Highways 2 & 3, Fort Macleod Bypass – Planning Study

# TIMELINE

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1. Open House #1 – March 20, 2008
2. **Open House #2 – July 3, 2008**
3. Open House #3 – September 2008
4. Study Completion – October 2008

# Highways 2 & 3, Fort Macleod Bypass – Planning Study

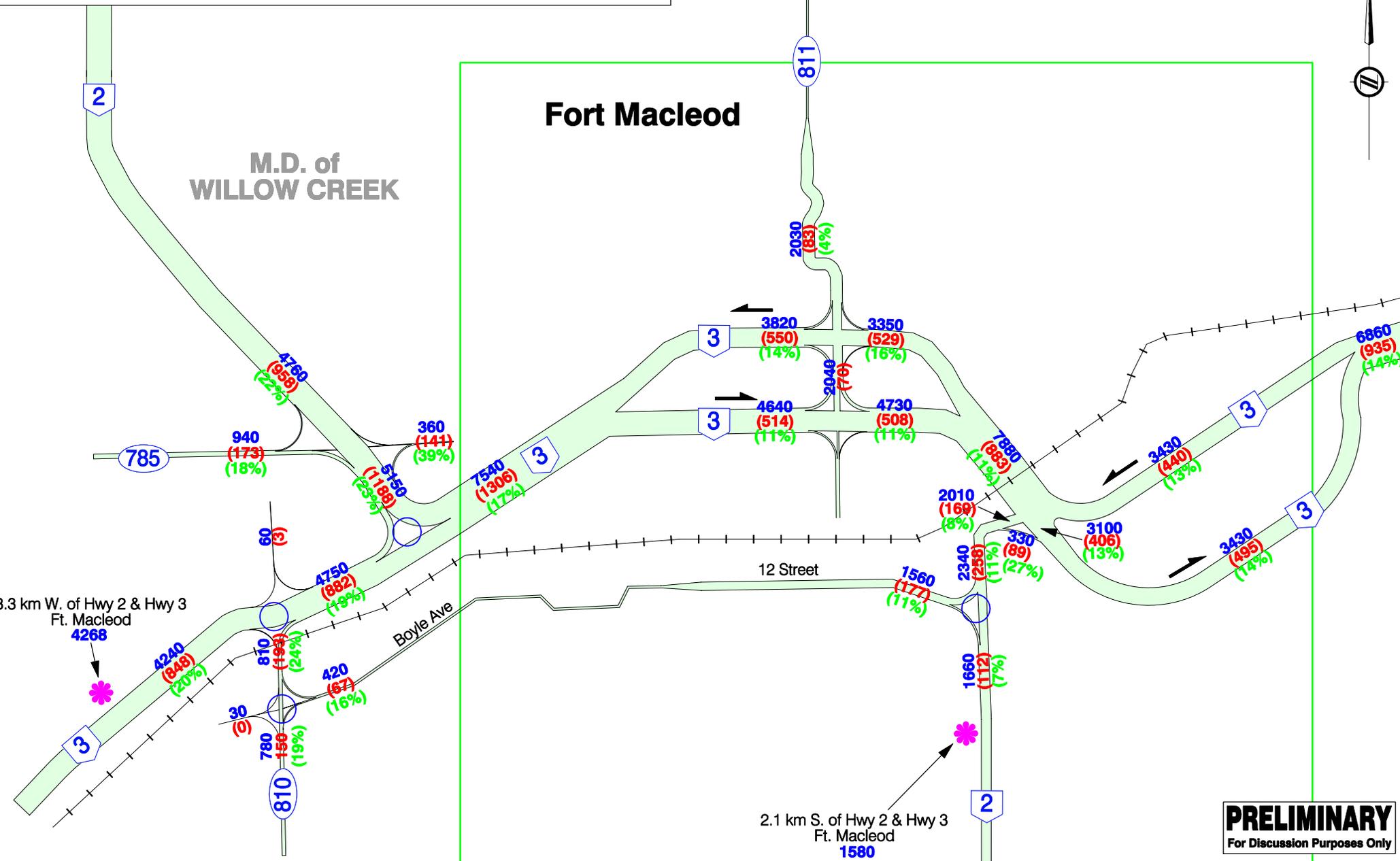
## OPEN HOUSE #1 – March 20, 2008

### Summary of Concerns from Open House #1

Concern or Interest	Response
1      Timing of highway improvements? Interest in seeing construction soon.	8
2      Right-of-way requirements and property impacts.	4
3      Input regarding route alignment.	4
4      Interest in seeing more detailed plans.	3



# 2007 Study Area Traffic Flow Diagram



**PRELIMINARY**  
For Discussion Purposes Only

**Legend**

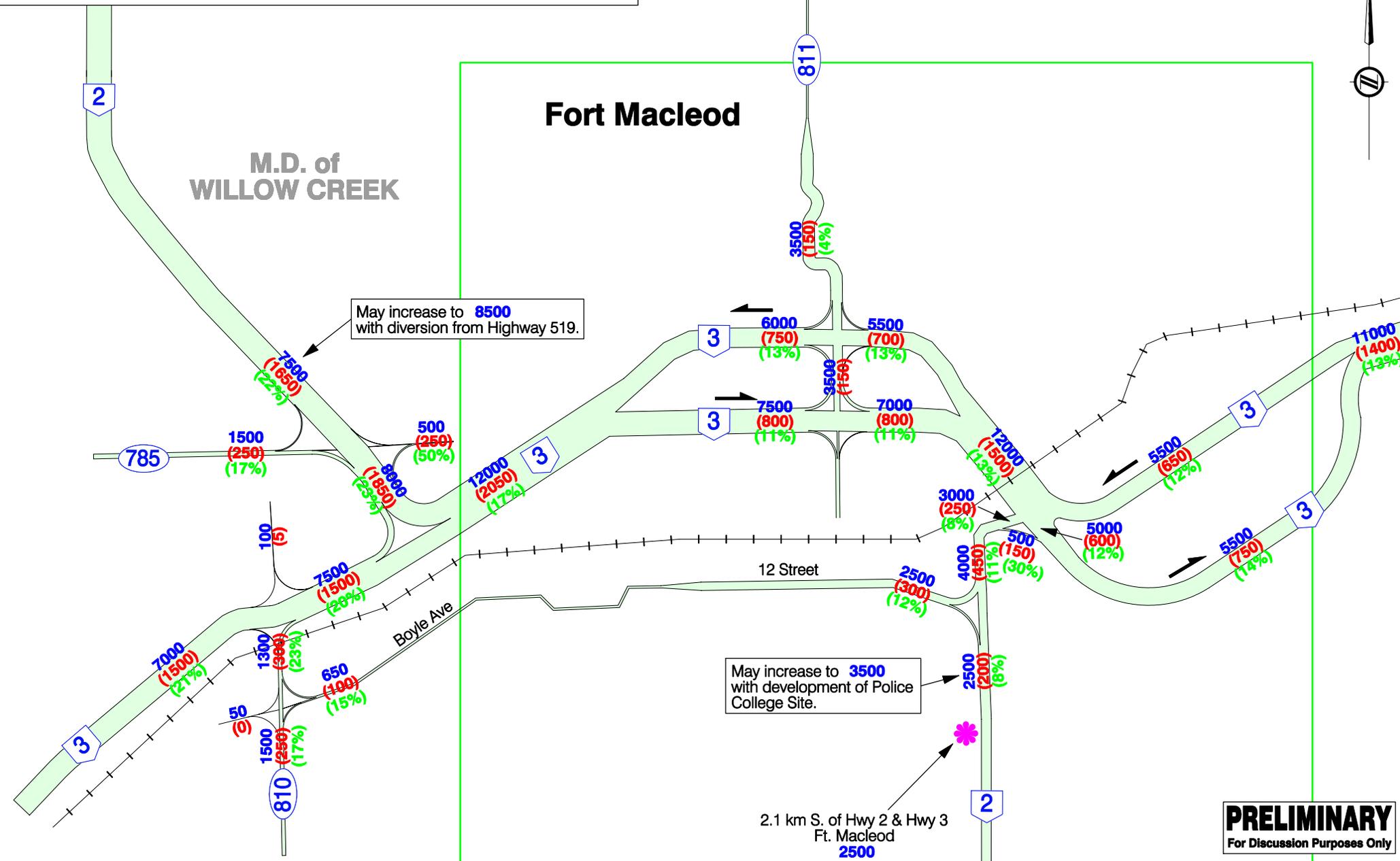
2130	Average Annual Daily Traffic (AADT) Volumes
(1530)	Truck Average Annual Daily Traffic (AADT) Volumes
(16%)	Percentage of Trucks
	Automatic Traffic Recording Station (ATR)
	2008 Traffic Counts



**Exhibit 5.2**  
**2007 Study Area Traffic Flow Diagram**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

Drawn by TD	Designed by	Checked by	Approved by	<b>JUN 27 2008</b>	NOT TO SCALE	Plan No. P.3333
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# 2028 FORECASTED TRAFFIC FLOW



**Legend**

- 2130 Average Annual Daily Traffic (AADT) Volumes
- (1530) Truck Average Annual Daily Traffic (AADT) Volumes
- (16%) Percentage of Trucks
- ✳ Automatic Traffic Recording Station (ATR)



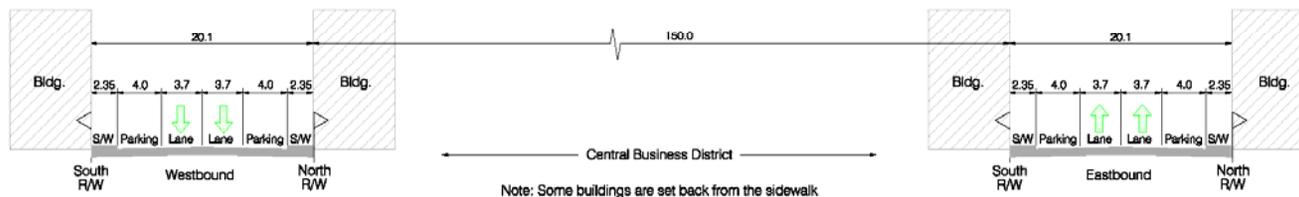
## Exhibit 5.3 2028 Forecasted Traffic Flow Diagram Highway 2 & 3, Fort Macleod Bypass Functional Planning Study

Drawn by TD	Designed by	Checked by	Approved by	<b>JUN 26 2008</b>	NOT TO SCALE	Plan No. P.3333
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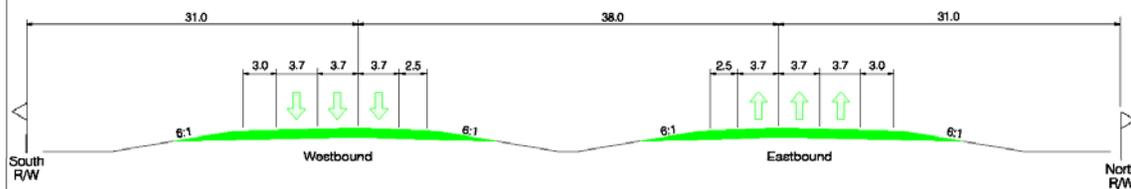
# Highways 2 & 3, Fort Macleod Bypass – Planning Study

## TYPICAL CROSS-SECTIONS

**Existing Highway 3 Through Fort Macleod**  
60 km/h Design Speed  
50 km/h Speed Limit



**Highway 3 Bypass  
Ultimate Cross Section**  
130 km/h Design Speed  
110 km/h Speed Limit



**PRELIMINARY**  
For Discussion Purposes Only

RFD 616.6 - 130  
HGDG Figure C-6.1 (Case 2)



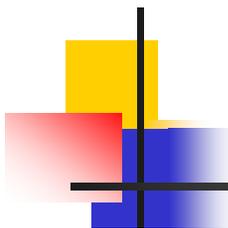
**Exhibit 8**  
**Typical Cross Sections**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

Drawn by      Designed by      Checked by      Approved by

FEB 28 2008

5m      0      10m

Plan No. P####.##



## Highways 2 & 3, Fort Macleod Bypass – Planning Study

# SOUTH CORRIDOR CONCEPT

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The department is considering a South Corridor alignment because:

- It better allows the existing interchange to be upgraded to a full access interchange.
- It provides more opportunities for the Town to develop north of the bypass route.
- It moves the bypass route further away from existing developed areas.
- The future Highway 2 South interchange is centrally located to access developable lands remaining south of the bypass route.

# SOUTH CORRIDOR NETWORK FLOWS

M.D. of WILLOW CREEK

Fort Macleod

Future Police and Peace Officer Training Center (Main Site)

(Optional Site)

Likely Access to West Fort Macleod and Calgary

To Lethbridge or East Fort Macleod

Primary Access

Primary Access

Primary Movement

Tertiary Movement

Secondary Movement

PIIKANI FIRST NATION

7/7/2008 C:\Users\69\_Hwy 2 & 3 Bypass-Ft. Macleod\dgn\South corridor.dgn

**LEGEND**

- Existing Highway
- 2004 South Corridor Concept
- Proposed Service Interchange
- Proposed System Interchange
- Potential Flyover Location
- Existing Flyover Location

Notes: 77% of the Traffic on Highway 2 Turns to/from the West on Highway 3

**McElhanney**  
Consulting Services Ltd.

**Alberta**

**Exhibit 5.3**  
**South Corridor Network Flows**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

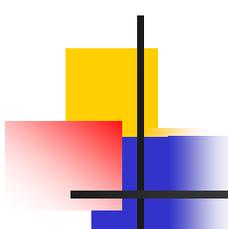
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**APR 28 2008**



Plan No. P.3333

**PRELIMINARY**  
For Discussion Purposes Only



## Highways 2 & 3, Fort Macleod Bypass – Planning Study

# SOUTH CORRIDOR INTERCHANGES

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Interchanges are anticipated at the following locations:

➤ *Service Interchanges:*

- Highway 3 Bypass and Hwy 2 South (east end)
- Existing Highways 2 and 3 (upgrade)

➤ *System Interchange:*

- Highway 3 Bypass and Highway 2 Extension

➤ *Directional Interchange:*

- Highway 3 Bypass and existing Hwy 3 West

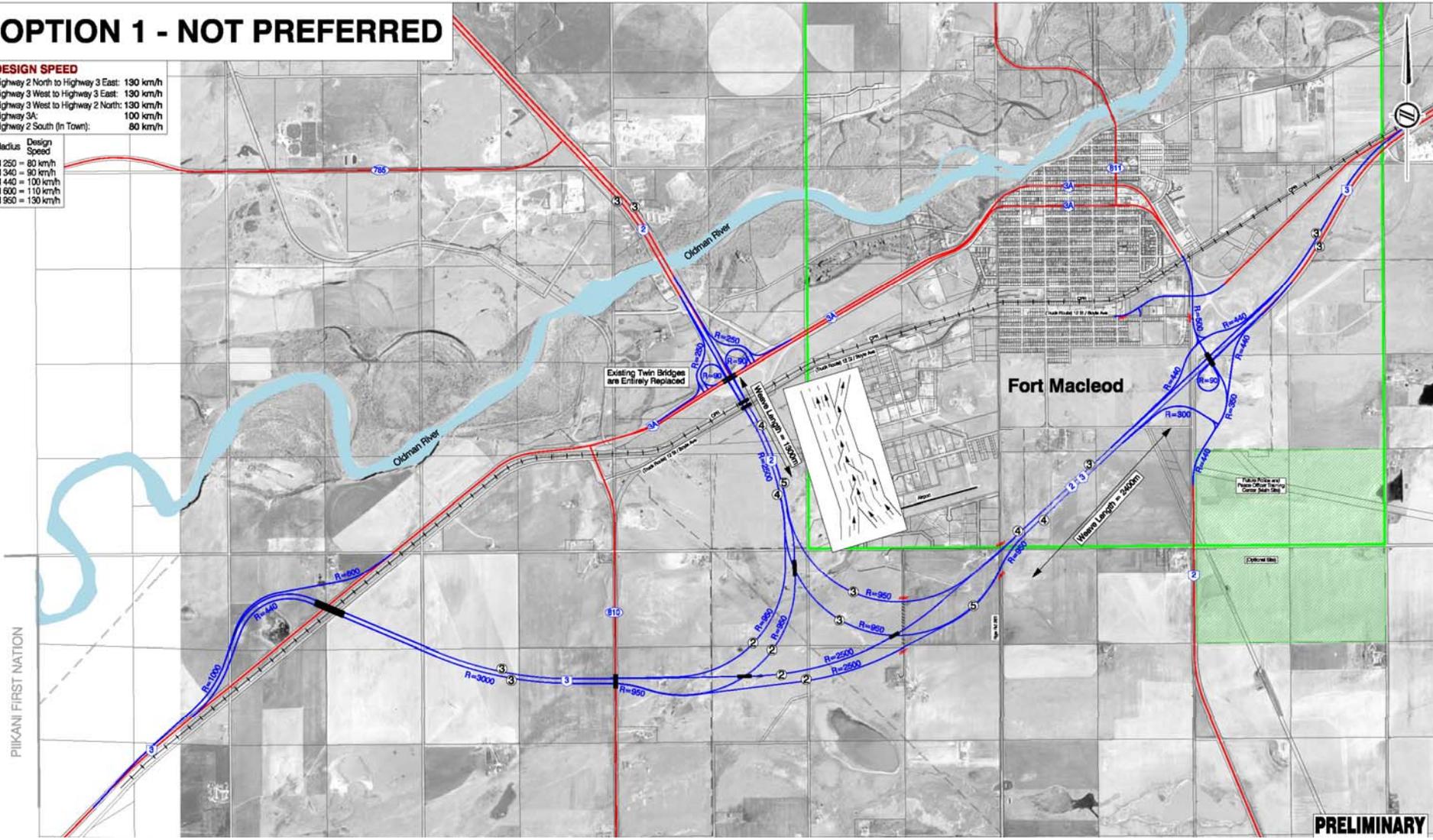
# OPTION 1 - NOT PREFERRED

**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (in Town):	80 km/h

Radius	Design Speed
R 250	= 80 km/h
R 340	= 90 km/h
R 440	= 100 km/h
R 600	= 110 km/h
R 960	= 130 km/h



- 1) 2<sup>nd</sup> largest interchange footprint.
- 2) Removes existing Highway 2/3 interchange.
- 3) 10 new structures.
- 4) Poor North-South Trade Corridor continuity

# OPTION 2 - NOT PREFERRED

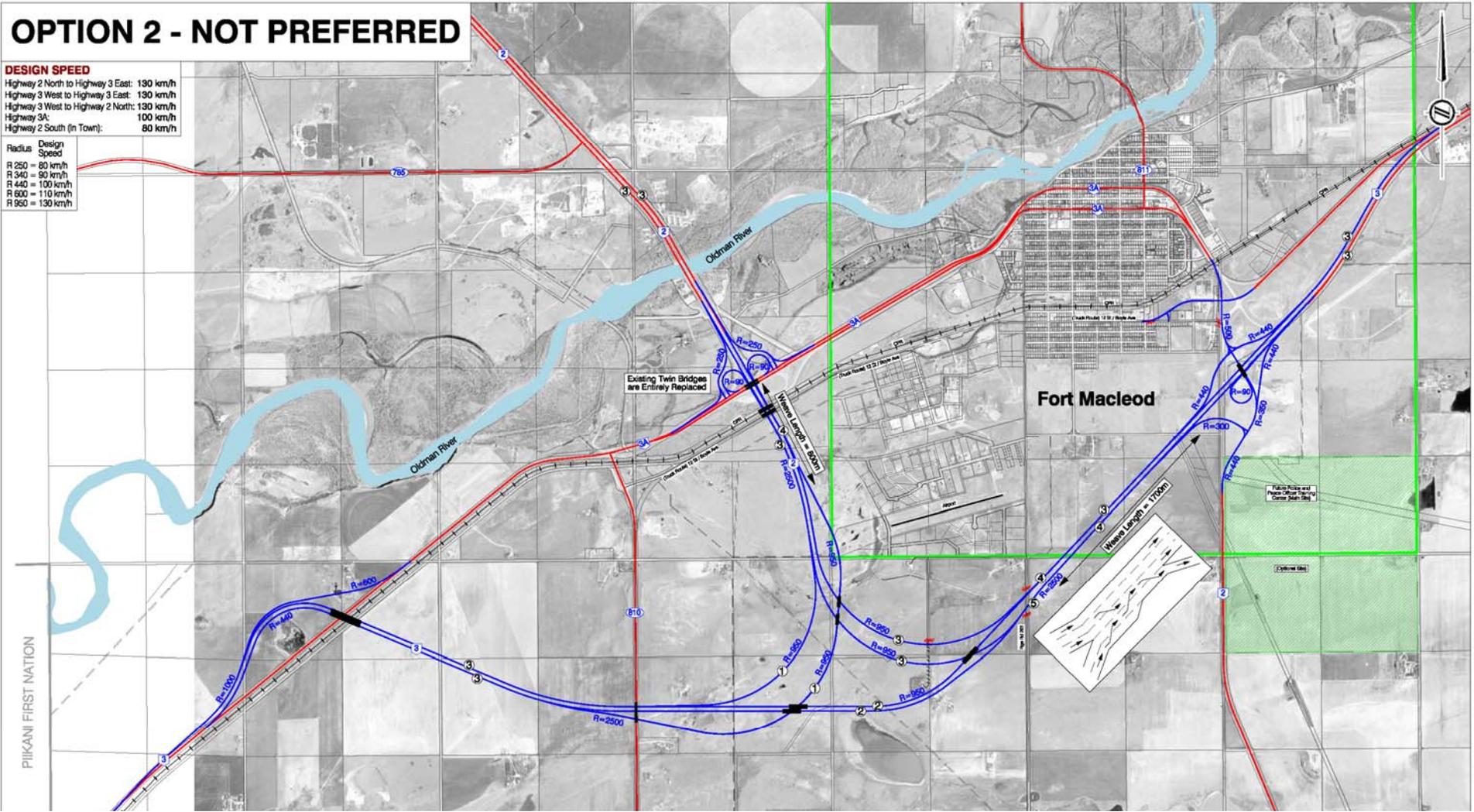
**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	130 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

**Radius Design Speed**

R 250 =	80 km/h
R 340 =	80 km/h
R 440 =	100 km/h
R 600 =	110 km/h
R 950 =	130 km/h



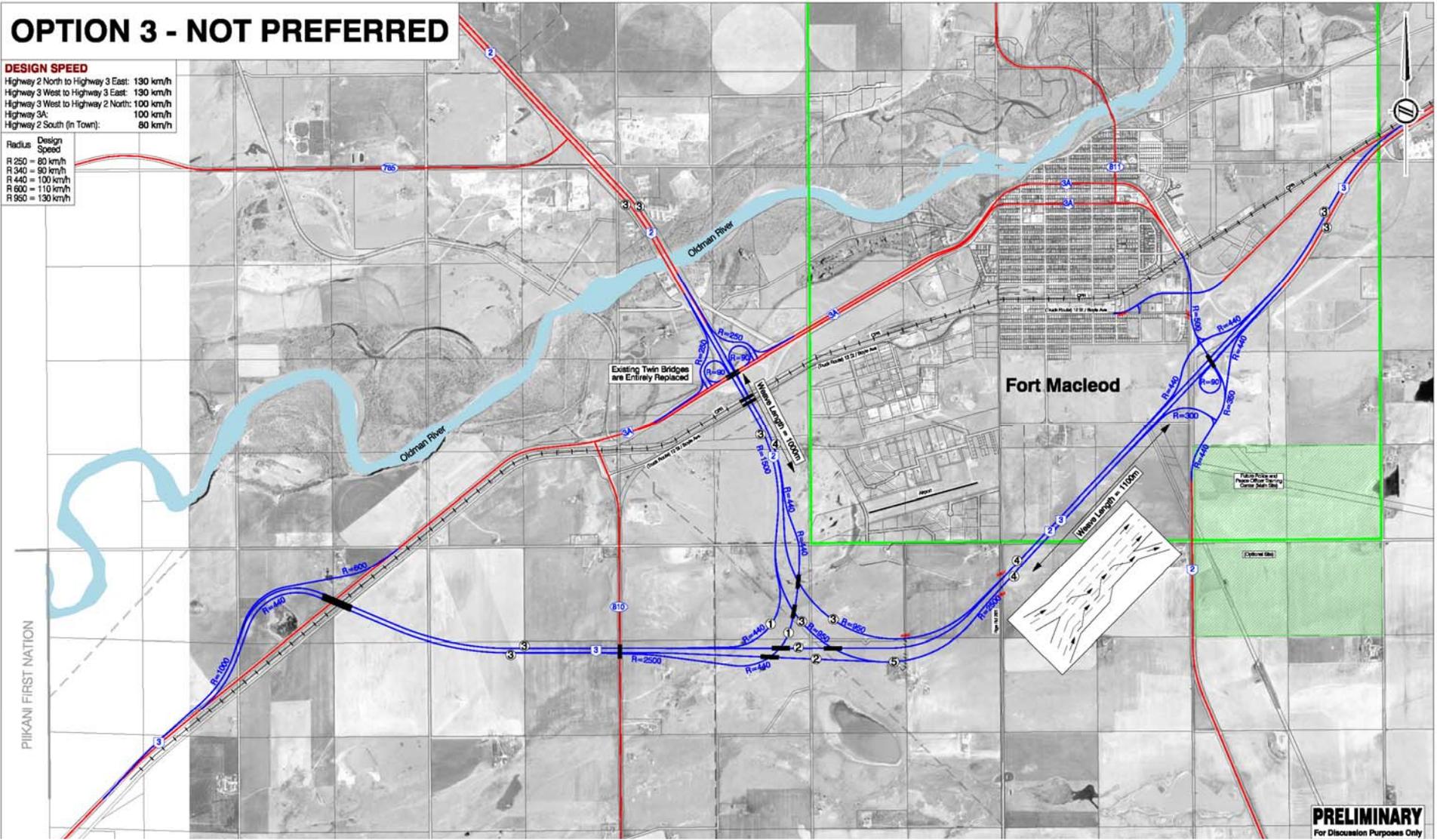
- 1) 1 lane ramps from the north to west and return.
- 2) Largest interchange footprint.
- 3) Removes existing Highway 2/3 interchange.
- 4) 12 new structures.
- 5) Longer bridge for Highway 810 flyover.
- 6) Encroaches on airport approach envelope.
- 7) Poor long-term upgrading potential.

# OPTION 3 - NOT PREFERRED

DESIGN SPEED	
Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

Radius	Design Speed
R 250	= 80 km/h
R 340	= 80 km/h
R 440	= 100 km/h
R 600	= 110 km/h
R 950	= 130 km/h



- 1) 1 lane ramps from the north to west and return.
- 2) Smallest interchange footprint.
- 3) Removes existing Highway 2/3 interchange.
- 4) 12 new structures.
- 5) Poor long-term staging.

# OPTION 4 - PREFERRED

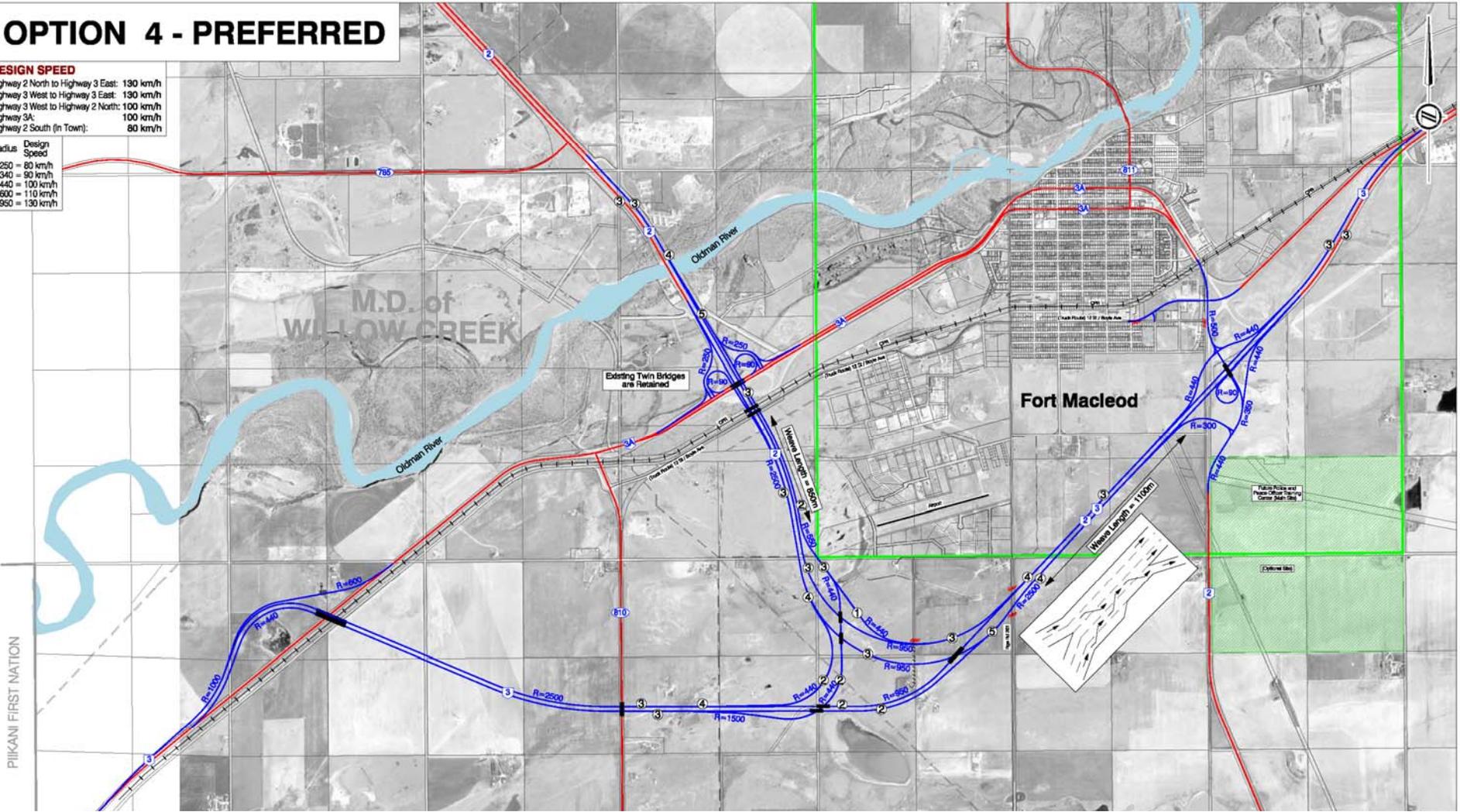
**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

**Radius Design Speed**

R 250 =	80 km/h
R 340 =	80 km/h
R 440 =	100 km/h
R 600 =	110 km/h
R 950 =	130 km/h

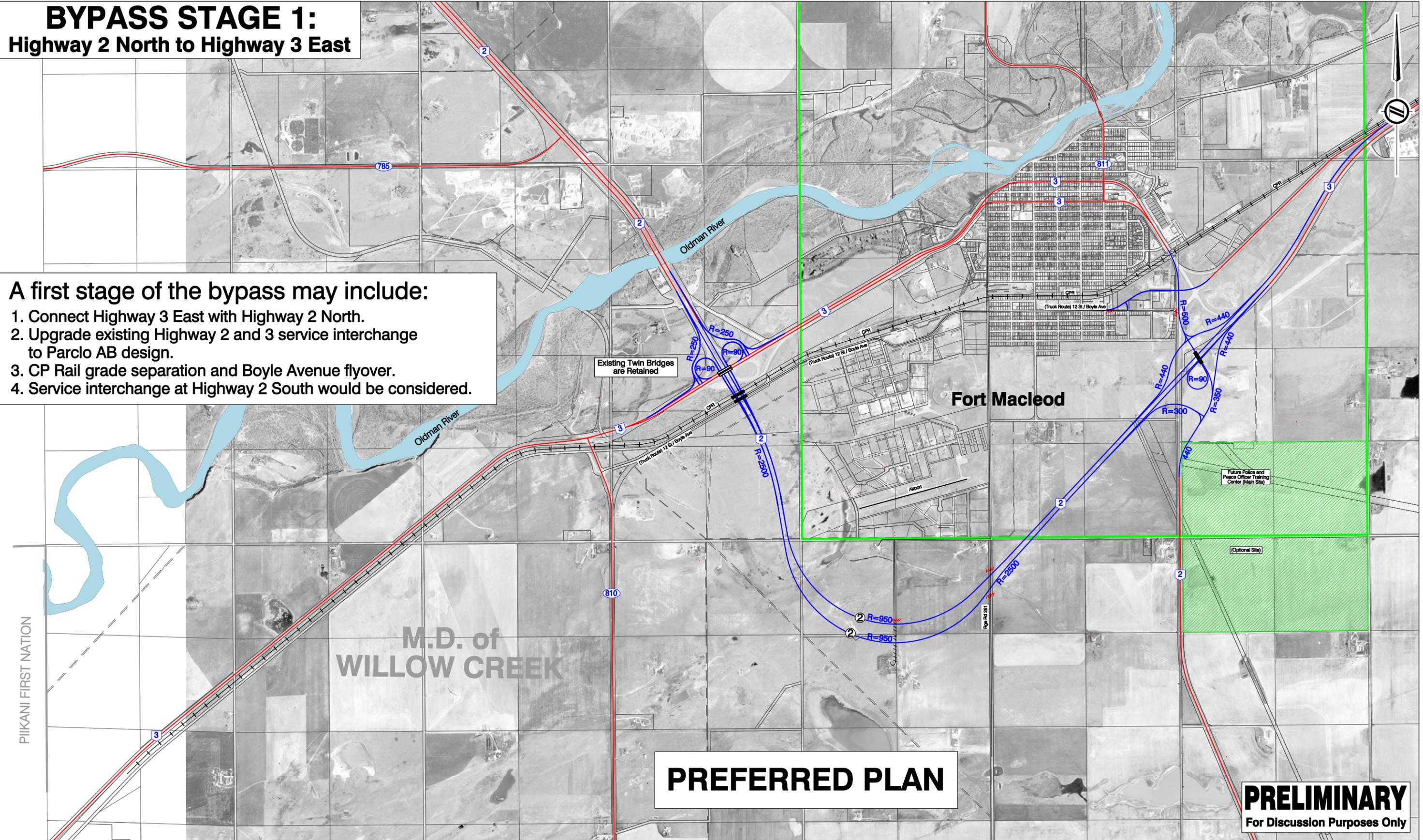


- 1) 1 lane ramps from the north to west & return (upgradeable).
- 2) 2<sup>nd</sup> smallest interchange footprint.
- 3) Retains existing Highway 2/3 interchange.
- 4) 9 new structures.
- 5) Touches edge of airport approach envelope.
- 6) Achieves best North-South Trade Corridor alignment.
- 7) Provides good future staging & flexibility.

# BYPASS STAGE 1: Highway 2 North to Highway 3 East

## A first stage of the bypass may include:

1. Connect Highway 3 East with Highway 2 North.
2. Upgrade existing Highway 2 and 3 service interchange to Parclo AB design.
3. CP Rail grade separation and Boyle Avenue flyover.
4. Service interchange at Highway 2 South would be considered.



**PREFERRED PLAN**

**PRELIMINARY**  
For Discussion Purposes Only

**LEGEND**

	Existing Alignment
	Proposed Alignment
	Municipal Boundary

**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

**Radius Design Speed**

R 250 =	80 km/h
R 340 =	90 km/h
R 440 =	100 km/h
R 600 =	110 km/h
R 950 =	130 km/h

**McElhanney**  
Consulting Services Ltd.

**Alberta**

Drawn by TD    Designed by HD    Checked by    Approved by

**Exhibit 17.2: Stage 1  
Fort Macleod Bypass**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

**JUN 24 2008**

300m 0 600m

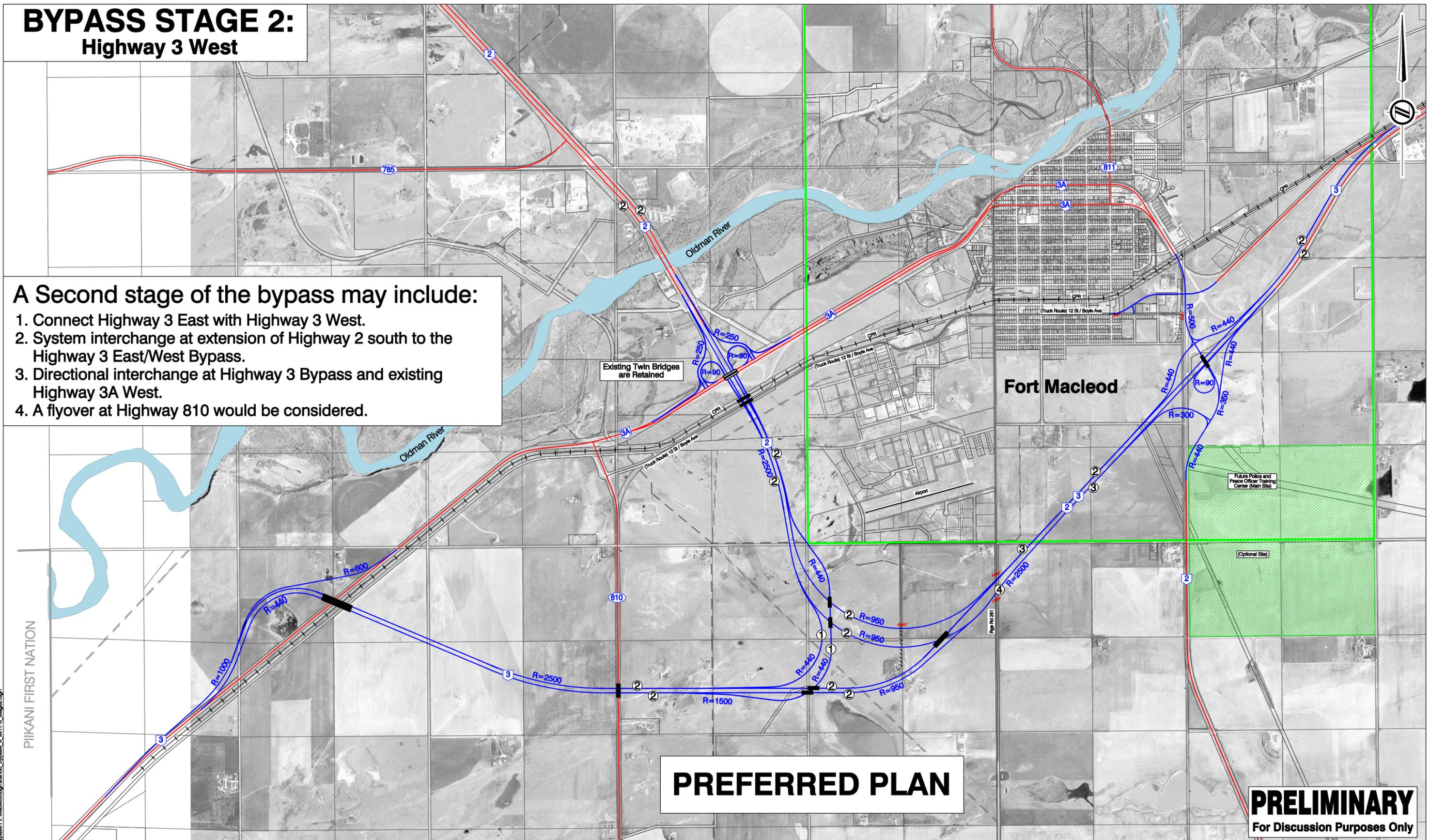
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# BYPASS STAGE 2: Highway 3 West

## A Second stage of the bypass may include:

1. Connect Highway 3 East with Highway 3 West.
2. System interchange at extension of Highway 2 south to the Highway 3 East/West Bypass.
3. Directional interchange at Highway 3 Bypass and existing Highway 3A West.
4. A flyover at Highway 810 would be considered.



**PREFERRED PLAN**

**PRELIMINARY**  
For Discussion Purposes Only

**LEGEND**

	Existing Alignment
	Proposed Alignment
	Municipal Boundary

**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

**Radius Design Speed**

R 250 =	80 km/h
R 340 =	90 km/h
R 440 =	100 km/h
R 600 =	110 km/h
R 950 =	130 km/h



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**Exhibit 17.3: Stage 2  
Fort Macleod Bypass**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

**JUN 24 2008**

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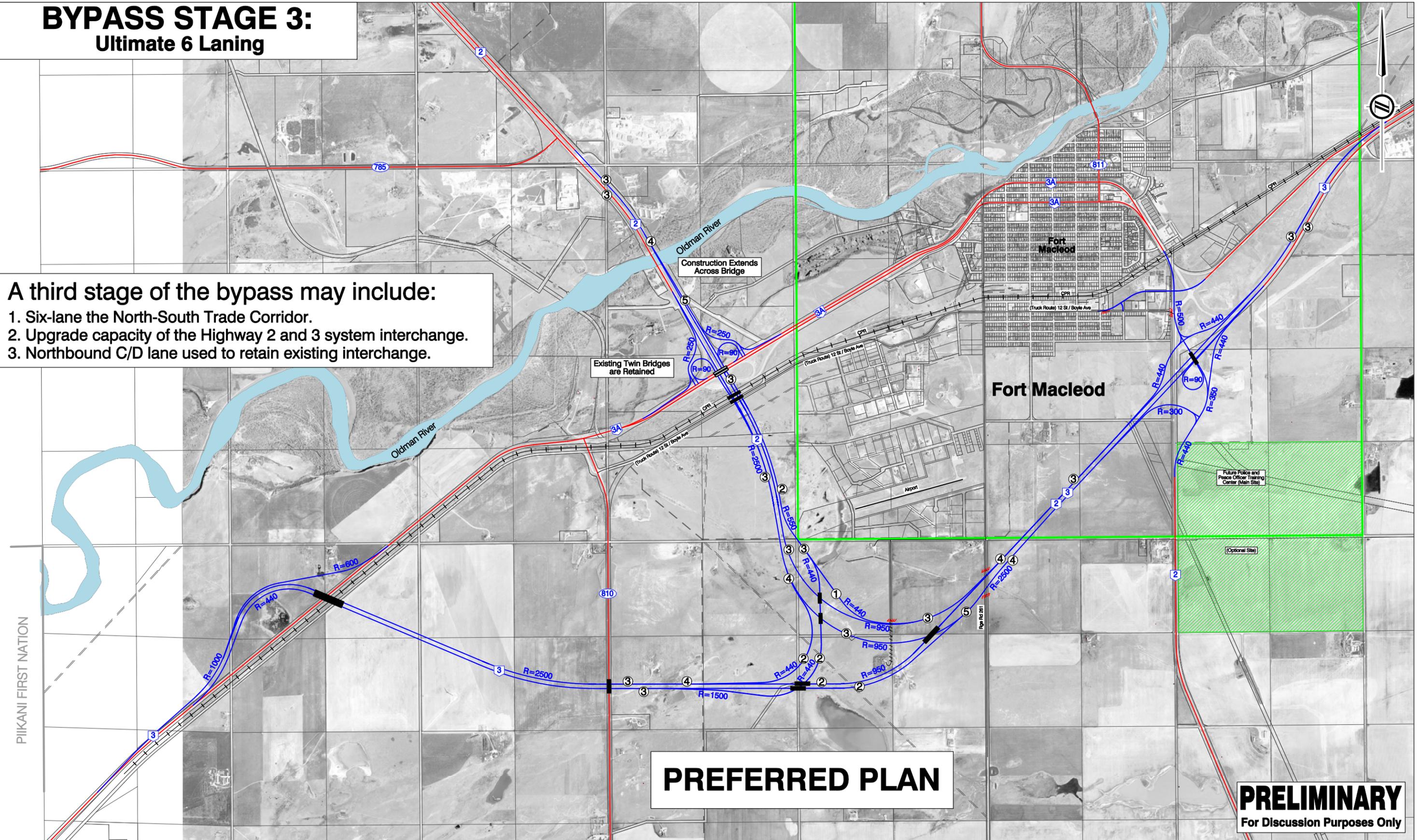
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# BYPASS STAGE 3: Ultimate 6 Laning

## A third stage of the bypass may include:

1. Six-lane the North-South Trade Corridor.
2. Upgrade capacity of the Highway 2 and 3 system interchange.
3. Northbound C/D lane used to retain existing interchange.



**PREFERRED PLAN**

**PRELIMINARY**  
For Discussion Purposes Only

**LEGEND**

	Existing Alignment
	Proposed Alignment
	Municipal Boundary

**DESIGN SPEED**

Highway 2 North to Highway 3 East:	130 km/h
Highway 3 West to Highway 3 East:	130 km/h
Highway 3 West to Highway 2 North:	100 km/h
Highway 3A:	100 km/h
Highway 2 South (In Town):	80 km/h

**Radius Design Speed**

R 250 =	80 km/h
R 340 =	90 km/h
R 440 =	100 km/h
R 600 =	110 km/h
R 950 =	130 km/h

**McElhanney**  
Consulting Services Ltd.



Drawn by TD    Designed by HD    Checked by    Approved by

**Exhibit 17.4: Stage 3  
Fort Macleod Bypass**  
Highway 2 & 3, Fort Macleod Bypass  
Functional Planning Study

**JUN 24 2008**

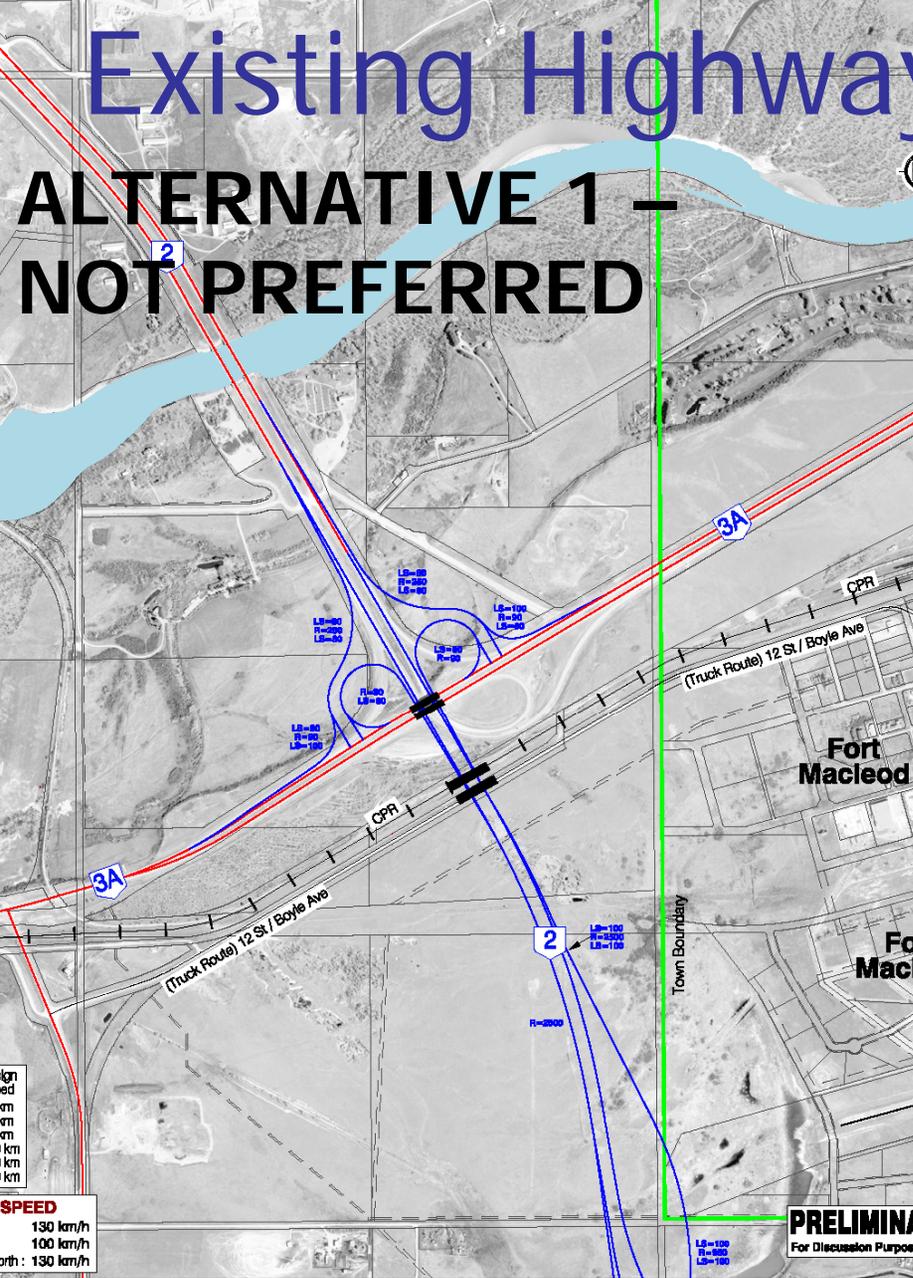
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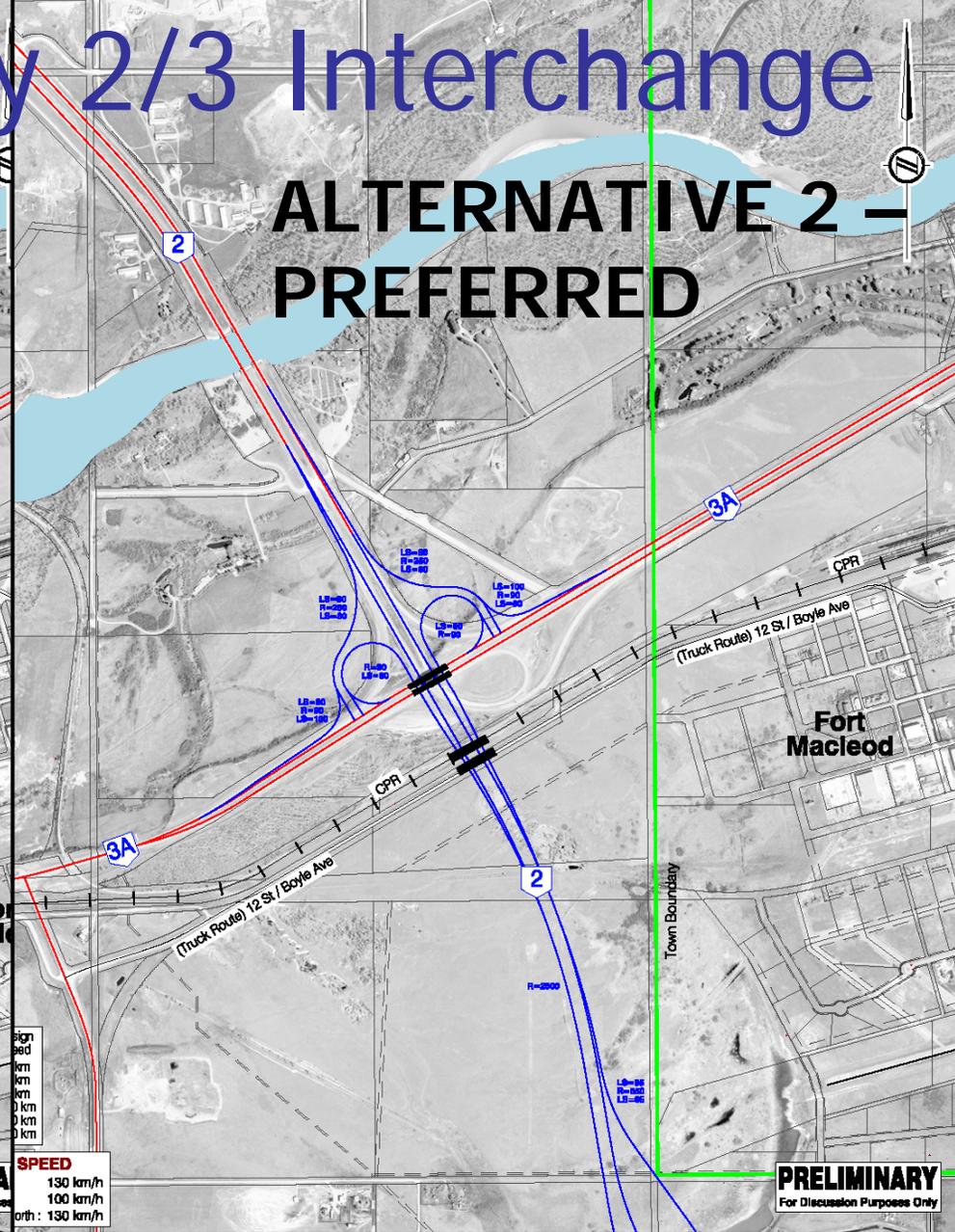
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# Existing Highway 2/3 Interchange

## ALTERNATIVE 1 – NOT PREFERRED



## ALTERNATIVE 2 – PREFERRED

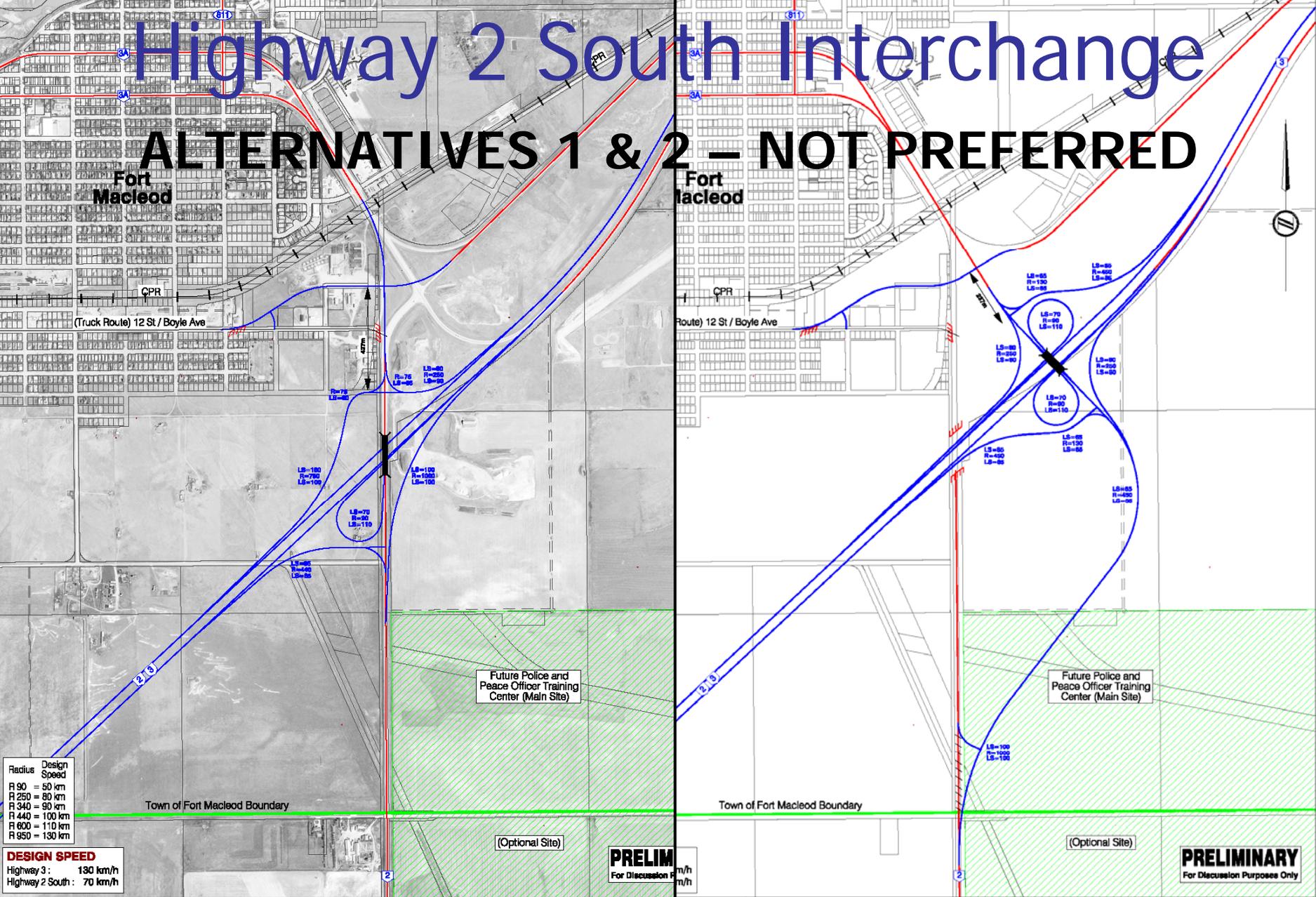


1. Removes/replaces existing structures.
2. No separate deceleration lanes.

1. Retains existing structures.
2. Provides separate deceleration lanes.

# Highway 2 South Interchange

## ALTERNATIVES 1 & 2 – NOT PREFERRED



1. Bridge on skew; costly to build & maintain.

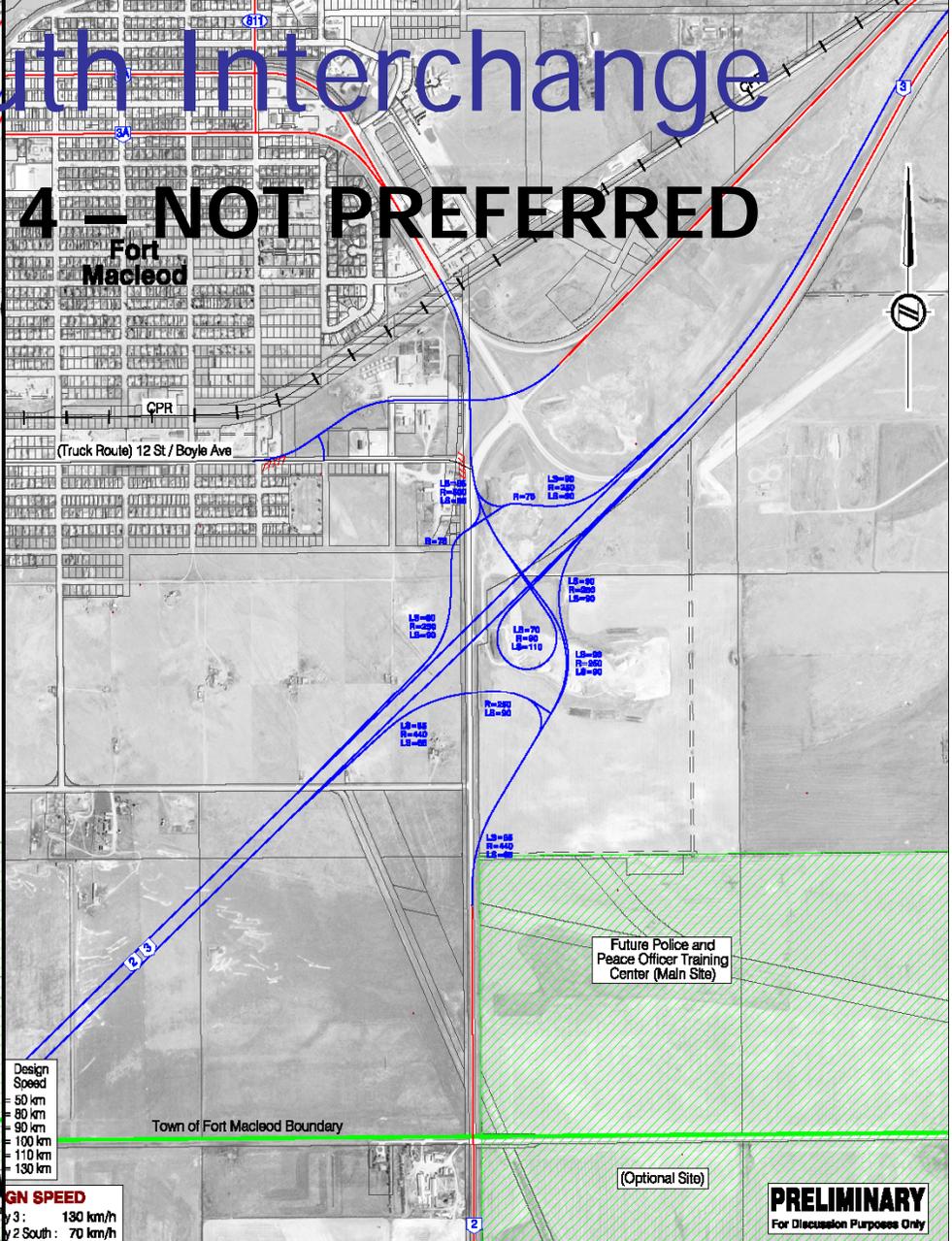
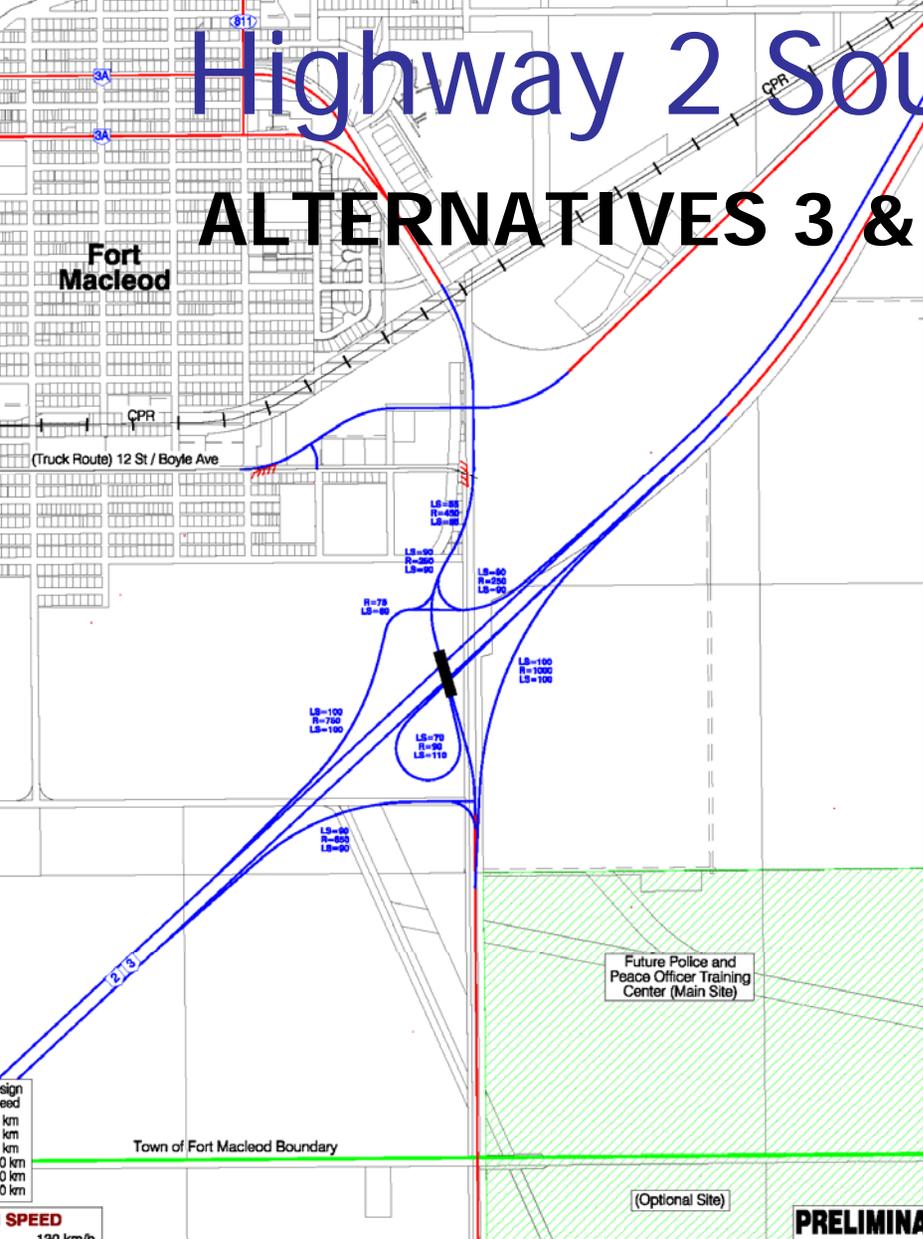
2. Poor ramp design on north side.

1. Significant impacts to Police College site.

2. Large interchange footprint.

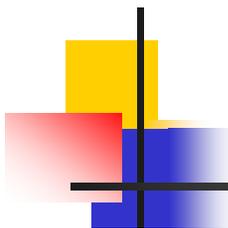
# Highway 2 South Interchange

## ALTERNATIVES 3 & 4 – NOT PREFERRED



1. Low standard ramp geometry.
2. Bridge still on a significant skew.
3. Close to existing development.

1. Low standard interchange geometry.
2. Poor sight lines.



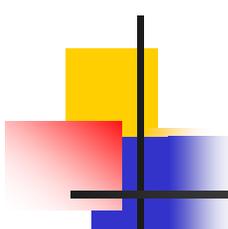
Highways 2 & 3, Fort Macleod Bypass – Planning Study

# ENVIRONMENTAL RESOURCES

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The study involves reviewing the following environmental issues:

- Soils & Vegetation
- Fish and Wildlife
- Historical Resources
- Stormwater Management
- Geotechnical Conditions



## Highways 2 & 3, Fort Macleod Bypass – Planning Study

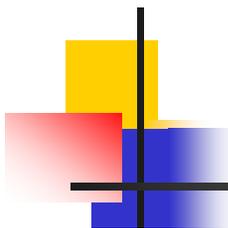
# EVALUATION CRITERIA

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The bypass alternatives are being evaluated based on criteria in several areas:

- Environmental Resources
- Public Input
- Freeway Design Standards
- Right-of-Way Requirements
- Staging & Constructability
- Noise Analysis
- Costs

(not in order of importance; more may be identified)

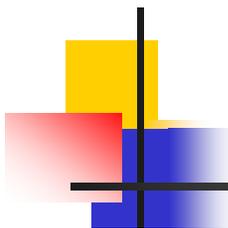


## Highways 2 & 3, Fort Macleod Bypass – Planning Study

# WHAT HAPPENS NEXT?

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- The Preferred Alternative will be modified and developed in detail taking into account the comments received here and from other stakeholders.
- The final plan to be recommended to Alberta Transportation will first be presented at Open House #3.



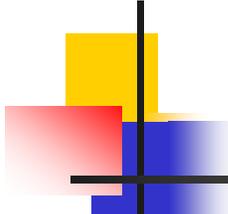
Highways 2 & 3, Fort Macleod Bypass – Planning Study

# WE NEED YOUR HELP.

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## *WHAT HAVE WE MISSED?*

- Please help us by taking the time to fill out the questionnaire provided and drop in the box near the entrance.
- The questionnaire can also be returned by mail to the address on the back.



# OPEN HOUSE #2

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## **HIGHWAYS 2 and 3 Fort Macleod Bypass Functional Planning Study**

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**THANK YOU  
FOR ATTENDING**