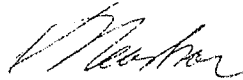


**Transportation Standing Committee
June 23, 2011**

TO: Chair and Members of Transportation Standing Committee



SUBMITTED BY: _____
Ken Reashor, P.Eng., Director, Transportation & Public Works

DATE: June 1, 2011

SUBJECT: Bayers Road / Highway 102 Corridor Study

ORIGIN

At the April 3, 2007 meeting of Halifax Regional Council (Item 10.1.6 deferred from March 27, 2007) a motion was passed that HRM partner with Nova Scotia Transportation & Infrastructure Renewal on a Corridor Study for Bayers Road/Highway 102 and Highway 107.

RECOMMENDATION

It is recommended that the Transportation Standing Committee make the following recommendation to Halifax Regional Council:

Adopt, in principle, the Bayers Road/Highway 102 Corridor Study as it applies only to Bayers Road (from the CN overpass to Windsor Street) and only for the purpose of securing or preserving the required right-of-way recommended in the plan and shown in Attachment A.

BACKGROUND

The need for addition of traffic capacity to the Bayers Road corridor was identified in the HRM Road Network Functional Plan and was included in the Regional Municipal Planning Strategy adopted by Regional Council in June, 2006. With major growth centres identified for Bedford South and Bedford West, traffic demand on Highway 102 and Bayers Road is certain to increase even with good transit service in place. The addition of capacity to Bayers Road will result in traffic loading being reduced on several other corridors that are currently experiencing high levels of congestion and delay and freeing up capacity for longer-term growth.

In 2007, the Halifax Regional Municipality (HRM) in partnership with the Nova Scotia Department of Transportation & Infrastructure Renewal (NSTIR) contracted a team of consultants to complete a transportation study investigating the Bayers Road / Highway 102 corridor. The objective of the study was to determine the ultimate capacity and best use of the corridor, including future traffic projections and subsequent infrastructure upgrades.

The recommendations of the Bayers Road / Highway 102 Corridor Study provide a long-term planning strategy for expansion of traffic capacity along the corridor. The addition of capacity is intended to maintain the existing level of service along the corridor for long-term traffic projections, rather than improving current traffic congestion.

DISCUSSION

Component 1 of the Bayers Road / Highway 102 Corridor Study included the development of projected traffic volumes and road capacity requirements for the corridor for the 2016, 2026, and 2036 horizon years. Based on projected settlement patterns, modal split targets, and road infrastructure upgrades identified in the 2006 HRM Municipal Planning Strategy, traffic volumes were estimated using a transportation demand model. The projected lane requirements for the corridor were estimated as summarized in Table 1:

Table 1 - Forecast Number of Mainline Lanes on Bayers Road

Location	Existing Lanes	Forecast Main Lanes		
		2016	2026	2036
Windsor St. to Connaught Ave.	3	4	4	6
Connaught Ave. to Joseph Howe Dr.	4	4	6	6
Joseph Howe Dr. to HWY103	4	6	6	6
HWY103 to HWY113	4	4	6	6
HWY113 to HWY101 / 107	4	4	6	6
HWY101 / 107 to HWY118	4	4	4	4

Adding traffic capacity along the corridor will present significant challenges in the form of extensive road construction work and property acquisition. Property acquisition will be particularly important along Bayers Road between Windsor Street and Joseph Howe Drive, where several residential and commercial properties are affected.

Functional design for the proposed corridor alignment, which was completed in Component 2 of the study, was aimed at optimizing efficiency and safety while limiting impacts on adjacent properties as much as possible. Attachment B includes images that illustrate the additional right-of-way that will be required to facilitate road widening in selected locations for the 2026 horizon. Property acquisition requirements vary. For the majority of properties (estimated to be 80 properties in total) only a narrow strip of land along the front edge would be required. However, in some cases entire lots will be required. This includes six residential lots (two of which have already been acquired), three apartment buildings and a large portion of a property owned by HRM and used by the School Board.

The costs associated with road capacity upgrades along the proposed corridor alignment were estimated as part of Component 2 of the study. The total estimated construction cost to widen Bayers Road between Windsor Street and Highway 102 is \$16 million. These order of magnitude costs are presented in 2009 dollars, and are intended only to provide a basis for long-term planning.

There are several key points of consideration in addressing the corridor issue:

- 1. The objective of the staff recommendation is to ensure that future development along Bayers Road will occur in such a way that future corridor opportunities are preserved. There is no recommendation at this time to widen the street, nor to purchase properties.**

Approval of Regional Council to establish an expanded Bayers Road corridor will allow staff to ensure the corridor is protected when reviewing development applications and other projects. Without Regional Council stating the desire to preserve a corridor, a development proposal could result in a building structure being located in a way that would hamper any future requirement for road widening or other corridor use. Should a road infrastructure project be deemed necessary in the future, its implementation cost will be significantly higher. On the other hand, shaping development changes around a wider corridor, whether the street itself is ever widened, should not pose a hardship on the ability of the street to redevelop.

- 2. Developing a transit corridor along Bayers Road may delay or eliminate the need for additional traffic lanes.**

The Halifax Peninsula Transit Corridor Study, launched in February of this year will look for opportunities to increase the effectiveness of transit operation across the Halifax peninsula. Giving a level of priority to transit buses can have a positive effect on travel time, efficiency and reliability to a degree that some commuting trips will be attracted from vehicle to transit. A significant shift in trips may delay the need for adding traffic lane capacity to the Bayers Road

corridor. However, a meaningful shift in trips is likely to result only from the creation of a dedicated transit lane which will require a widened right-of-way corridor. The Transit Corridor Study, including community consultation, is scheduled for completion in December.

3. Transportation capacity, whether traffic or transit lanes, is critical to support the settlement pattern established in the Regional Plan.

Two of the major growth centres identified in the 2006 Regional Plan were Bedford West and Bedford South. These centres were chosen, in part, for their ability to be well serviced from a transportation perspective. These centres were judged to be advantageously located for service by conventional and higher order transit services and active transportation. Another consideration was that the road connection to the Regional Centre, the Highway 102/Bayers Road corridor, was better suited to capacity expansion than other regional corridors. The Road Network Functional Plan demonstrates that even very good transit service to Bedford West and Bedford South can't accommodate all of the projected growth of trip demand to the Regional Centre and that vehicle capacity will be required. To deny the ability to create that capacity, if needed, would hamper the viability of further developing those centres and would create pressure to shift to new growth centers that have already been judged as less supportable from an infrastructure perspective.

4. More capacity on the Bayers Road corridor relieves demand pressures on many other road corridors.

Many areas of the region, including Bedford South, Wedgewood, Rockingham, Clayton Park, Fairview, Fleming Heights, Cowie Hill and Spryfield have good access to the Highway 102/Bayers Road corridor but, because of the congestion on Bayer Road choose other corridors like the Bedford Highway, Herring Cove Road and the St. Margaret's Bay Road. Added capacity on the Highway 102/Bayers Road corridor will draw traffic away from these other congested corridor. Attachment C illustrates these demand patterns.

5. An expanded corridor need not necessarily mean a wider road.

As stated previously, a widened corridor can be of value in creating a new dedicated transit lane. If a wider corridor is created and it is clear at a future date it will not be required for additional traffic lanes, the corridor could be used to accommodate other uses such as an active transportation route or a treed boulevard similar to Connaught Avenue.

6. Expansion of Bayers Road represents just one component being considered in accommodating future transportation onto the Peninsula.

There are several initiatives being carried out with the objective of servicing the planned major growth centres in Bedford West and Bedford South.

- At the direction of Regional Council, higher order transit services including bus rapid transit, ferry, and heavy commuter rail are being studied further as options for servicing the Bedford West and Bedford South centres.
- Implementation of the recommendations of the Transportation Demand Management (TDM) Functional Plan will aim to reduce single occupant vehicle trips through a variety of measures including ridesharing, promoting transit (park-and-ride lots, transit pass programs), and a host of incentives and disincentives that reward more sustainable methods of transportation and deter less sustainable methods.
- Implementation of the recommendations of the Active Transportation (AT) Functional Plan will add and improve AT infrastructure to better facilitate trips made by walking and cycling.
- Neighbourhood focused initiatives such as the upcoming Regional Centre Neighbourhood Greenprint initiative plus the Regional Plan Review will help to focus growth in neighbourhoods where non-vehicle commuting is an effective alternative.

The ongoing effort to better accommodate non-vehicle trips will serve to reduce traffic demand and hopefully delay or eliminate the need for traffic lanes.

7. There are alternative ways of securing the proposed corridor.

Typically, a transportation corridor such as this would be secured by establishing a Transportation Reserve Zone. This zoning protects the land from development, but requires the property to be purchased by the Municipality within five years of establishing the zone or within one year of being requested to purchase it by the land owner. If the Municipality does not meet this condition (whichever occurs first), the land reverts to a alternative zoning previously established.

Another option would be to establish a Setback Line. In order to implement a building setback to preserve the future corridor, an amendment to the land use by-law to establish the building setback will be necessary. At present, Halifax has an old Building Line Plan that forms part of the LUB. The plan illustrates larger setbacks than the norm from street rights of way where future widening is intended. The map is out of date and is on the list of items to update when we go about making amendments to land use controls during the next phase of HRM by Design for the Regional Centre.

The recommendation of this report does not specify at this time which mechanism would be used to secure the Bayers Road Corridor to provide staff an opportunity to explore means other than a Transportation Reserve. Both mechanisms are beneficial in their ability to delay the need for HRM to purchase properties. In the interim, Regional Council approval of the intent to secure a corridor is essential in assessing development applications and other issues related to the future of the corridor.

BUDGET IMPLICATIONS

There are no immediate budget implications in adoption of this report. Projects recommended in the Bayers Road / Highway 102 Corridor Study and acquisition of individual properties will be brought before Regional Council for approval through the normal budgeting process. Preliminary estimates (without appraisal) of property acquisition on Bayers Road between the CN overpass and Connaught Avenue total \$5,000,000.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

Public information sessions were held in February 2009 to explain the study and obtain feedback from local residents, businesses, and landowners. The sessions were advertised and open to the general public. In addition, several elected officials and affected property owners were invited directly by mail. The sessions included presentation of functional plans and traffic analysis, a question and answer period, and opportunity to provide written feedback to the study team.

ALTERNATIVES

The Committee may choose not to forward a positive recommendation to Regional Council or to accept make a recommendation only as it pertains to a specific portion of the corridor.

Although community engagement on this project was conducted two years ago, the Committee may wish to defer a decision and direct Staff to undertake additional consultation prior to taking measures to preserve a corridor.

ATTACHMENTS

- A. Functional Design Drawings
- B. Right-of-Way Requirements - Sketches
- C. Shifting Traffic to Bayers/Hwy 102 Corridor

A copy of this report can be obtained online at <http://www.halifax.ca> or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Approved by:


David McCusker, P.Eng., Manager, Strategic Transportation Planning, 490-6696



Financial Approval by:

Bruce Fisher, MPA, CMA, A/Director of Finance/CFO, 490-6308

ATTACHMENT A
Figure 1/6



LEGEND AND NOTES

NUMBER OF LANES AND DIRECTION OF TRAFFIC
LANE LINES (WHITE DASHED LINES)
EDGE LINES (SOLID WHITE OR YELLOW LINES)

- DESIGN IS CONCEPTUAL ONLY BASED ON 2036 HORIZON YEAR TRAFFIC PROJECTIONS
- BAYERS ROAD TO BE WIDENED TO 4 LANES FROM WINDSOR STREET TO CONNAUGHT STREET SEE SHEET 40 FOR TYPICAL CROSS SECTION.

PROJECT NO.	20639
TITLE	CONCEPTUAL PLAN BAYERS ROAD -
PROJECT	BAYERS ROAD / HIGHWAY 102 CORRIDOR STUDY
DATE	MARCH 2010
	SHEET 01 SCALE 1:1000



Stantec

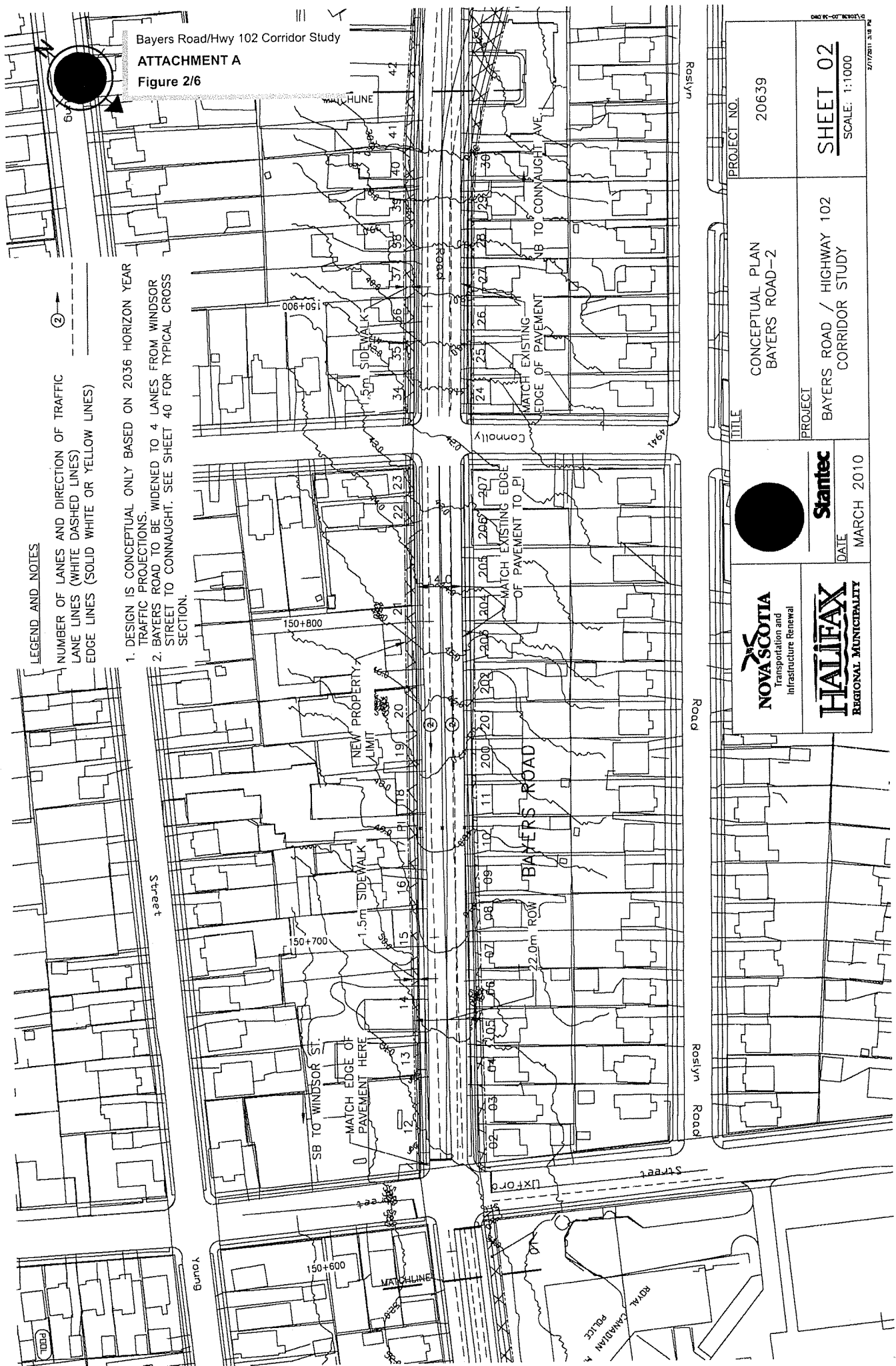
NOVA SCOTIA
Transportation and
Infrastructure Renewal




HALIFAX
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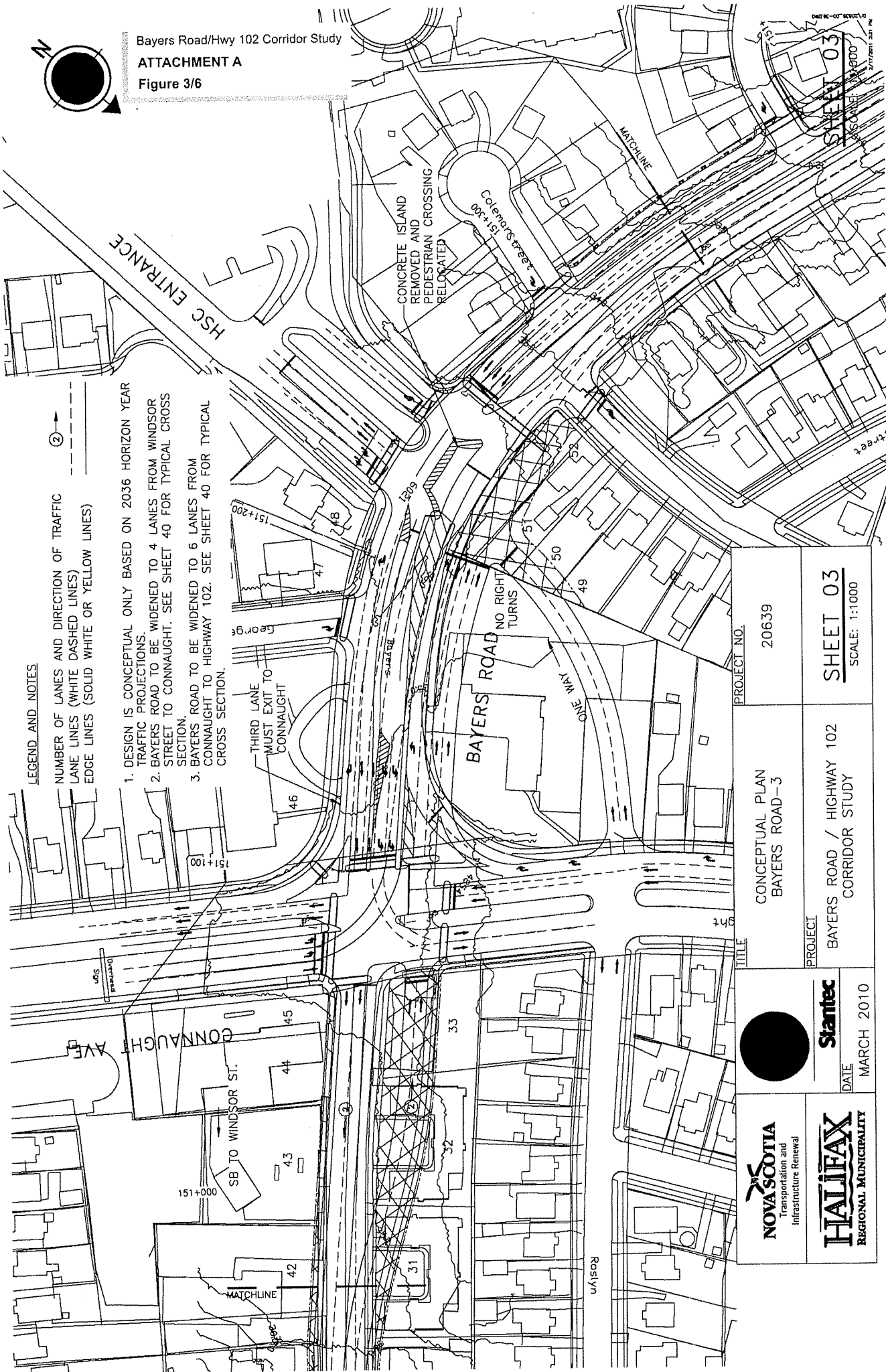
LEGEND AND NOTES

- ① NUMBER OF LANES AND DIRECTION OF TRAFFIC
- ② LANE LINES (WHITE DASHED LINES)
- ③ EDGE LINES (SOLID WHITE OR YELLOW LINES)

1. DESIGN IS CONCEPTUAL ONLY BASED ON 2036 HORIZON YEAR TRAFFIC PROJECTIONS.
2. BAYERS ROAD TO BE WIDENED TO 4 LANES FROM WINDSOR STREET TO CONNAUGHT. SEE SHEET 40 FOR TYPICAL CROSS SECTION.



			
		DATE MARCH 2010	
TITLE CONCEPTUAL PLAN BAYERS ROAD-2		PROJECT NO. 20639	
PROJECT BAYERS ROAD / HIGHWAY 102 CORRIDOR STUDY		SHEET 02 SCALE: 1:1000	



LEGEND AND NOTES

- NUMBER OF LANES AND DIRECTION OF TRAFFIC
- LANE LINES (WHITE DASHED LINES)
- EDGE LINES (SOLID WHITE OR YELLOW LINES)

1. DESIGN IS CONCEPTUAL ONLY BASED ON 2036 HORIZON YEAR TRAFFIC PROJECTIONS.
2. BAYERS ROAD TO BE WIDENED TO 4 LANES FROM WINDSOR STREET TO CONNAUGHT. SEE SHEET 40 FOR TYPICAL CROSS SECTION.
3. BAYERS ROAD TO BE WIDENED TO 6 LANES FROM CONNAUGHT TO HIGHWAY 102. SEE SHEET 40 FOR TYPICAL CROSS SECTION.



THIRD LANE MUST EXIT TO CONNAUGHT

CONCRETE ISLAND REMOVED AND PEDESTRIAN CROSSING RELOCATED

BAYERS ROAD

NO RIGHT TURNS

ONE WAY

 NOVA SCOTIA Transportation and Infrastructure Renewal	 Stantec	PROJECT NO. 20639 CONCEPTUAL PLAN BAYERS ROAD-3
DATE MARCH 2010	PROJECT BAYERS ROAD / HIGHWAY 102 CORRIDOR STUDY	TITLE SHEET 03 SCALE: 1:1000

SHEET 03

SCALE: 1:1000

ATTACHMENT A

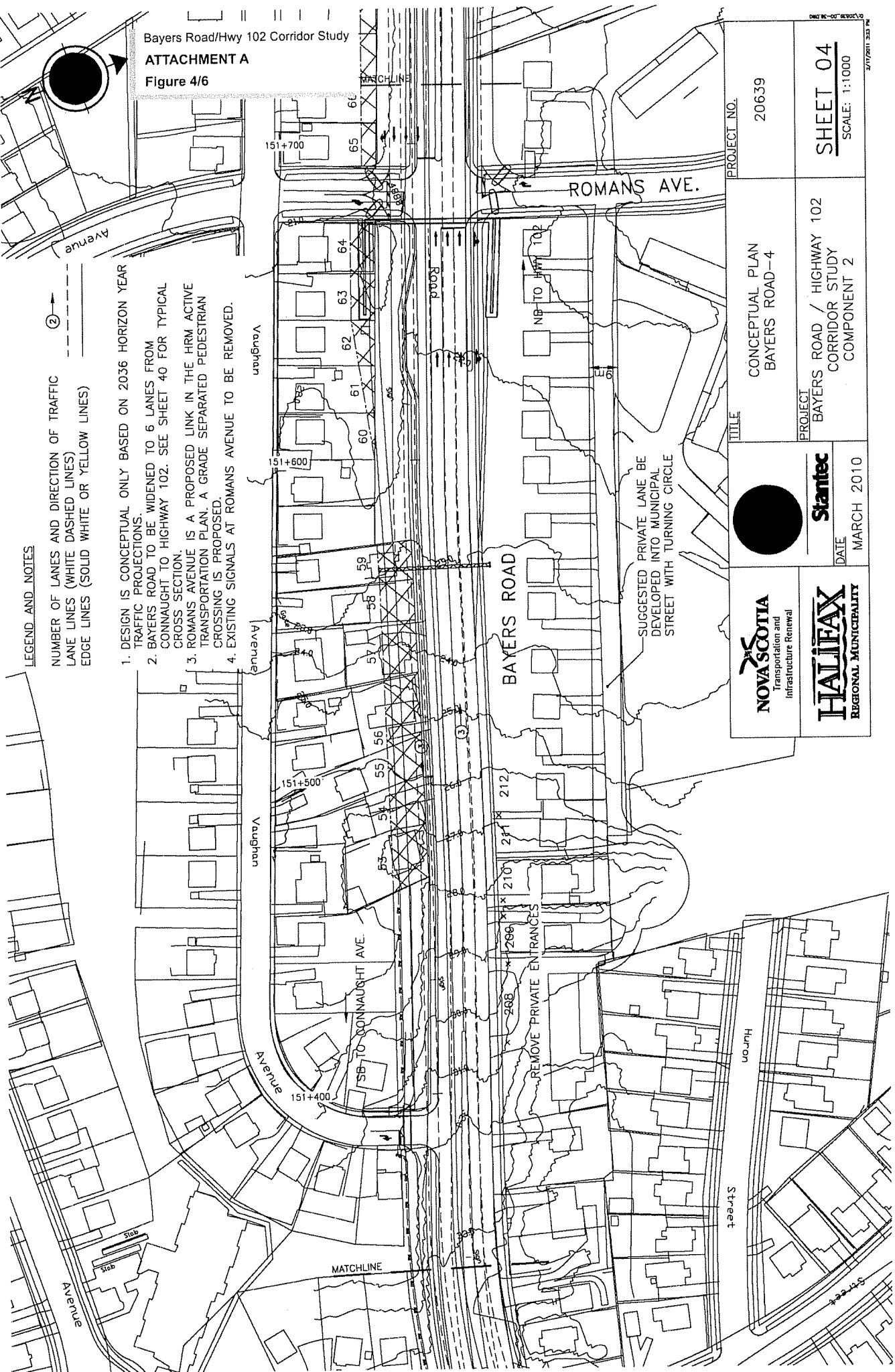
Figure 4/6

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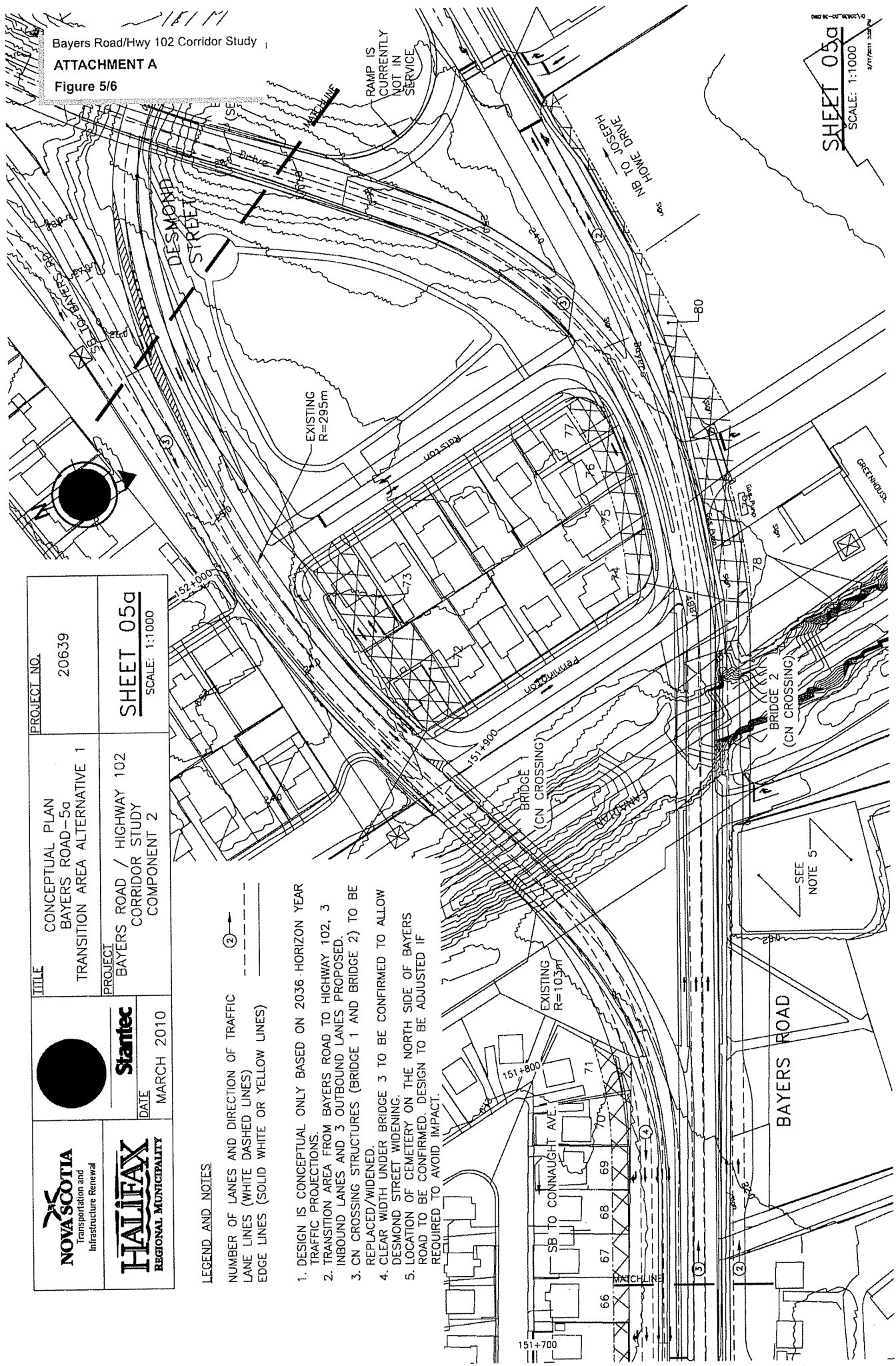
LEGEND AND NOTES

- ② NUMBER OF LANES AND DIRECTION OF TRAFFIC
- LANE LINES (WHITE DASHED LINES)
- LANE LINES (SOLID WHITE OR YELLOW LINES)

1. DESIGN IS CONCEPTUAL ONLY BASED ON 2036 HORIZON YEAR TRAFFIC PROJECTIONS.
2. BAYERS ROAD TO BE WIDENED TO 6 LANES FROM CONNAUGHT TO HIGHWAY 102. SEE SHEET 40 FOR TYPICAL CROSS SECTION.
3. ROMANS AVENUE IS A PROPOSED LINK IN THE IRM ACTIVE TRANSPORTATION PLAN. A GRADE SEPARATED PEDESTRIAN CROSSING IS PROPOSED.
4. EXISTING SIGNALS AT ROMANS AVENUE TO BE REMOVED.



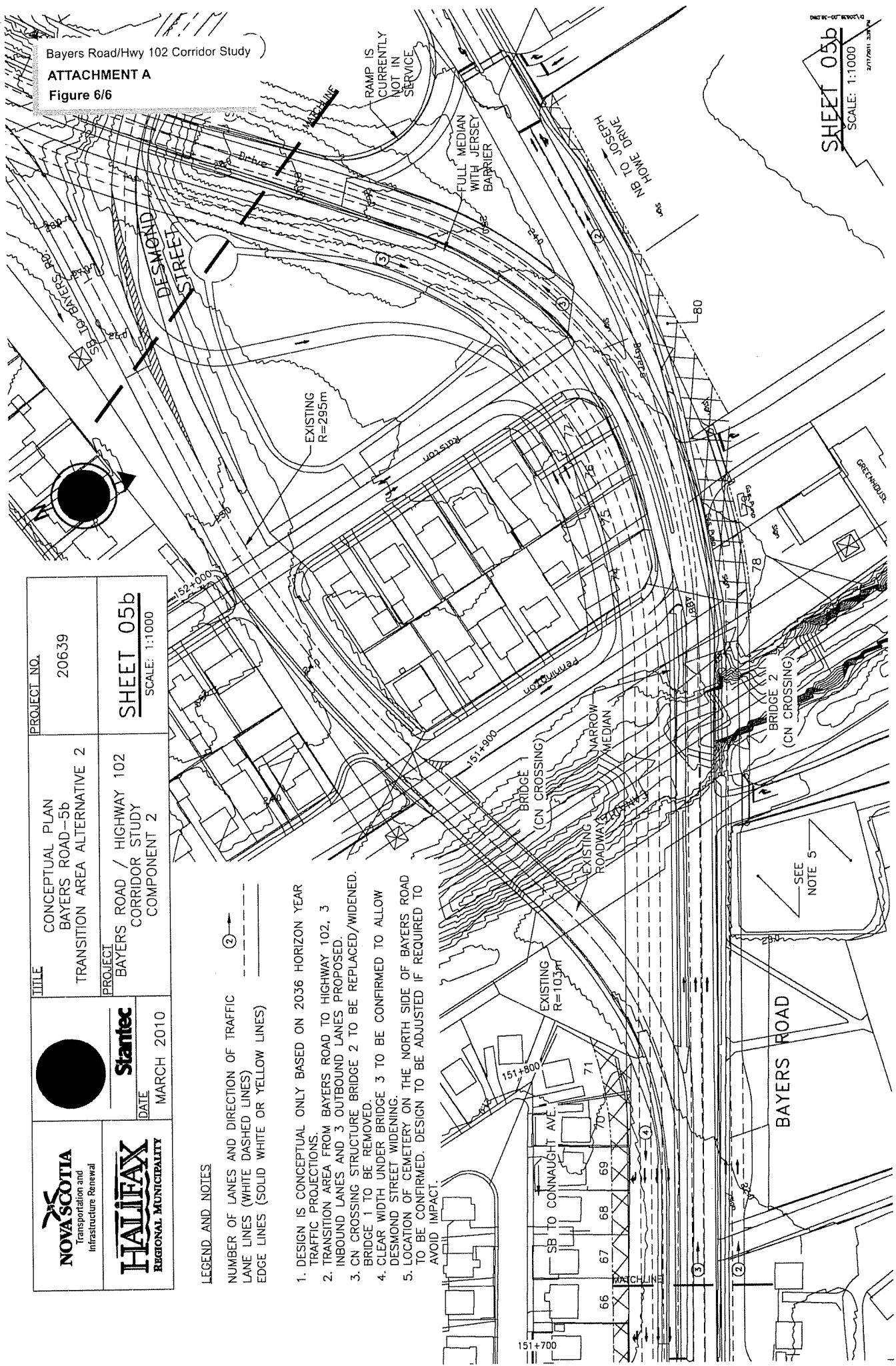
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 HALIFAX REGIONAL MUNICIPALITY	 DATE MARCH 2010	PROJECT NO. 20639	SHEET 05g SCALE: 1:1000
		TITLE CONCEPTUAL PLAN BAYERS ROAD - 5c TRANSITION AREA ALTERNATIVE 1	PROJECT BAYERS ROAD / HIGHWAY 102 CORRIDOR STUDY COMPONENT 2

- LEGEND AND NOTES**
- NUMBER OF LANES AND DIRECTION OF TRAFFIC
 LANE LINES (WHITE DASHED LINES) ②
 EDGE LINES (SOLID WHITE OR YELLOW LINES) ———
- DESIGN IS CONCEPTUAL ONLY BASED ON 2036- HORIZON YEAR TRAFFIC PROJECTIONS.
 - TRANSITION AREA FROM BAYERS ROAD TO HIGHWAY 102, 3 INBOUND LANES AND 3 OUTBOUND LANES PROPOSED.
 - CN CROSSING STRUCTURES (BRIDGE 1 AND BRIDGE 2) TO BE REPLACED/WIDENED.
 - CLEAR WIDTH UNDER BRIDGE 3 TO BE CONFIRMED TO ALLOW DESMOND STREET WIDENING.
 - LOCATION OF CEMETERY ON THE NORTH SIDE OF BAYERS ROAD TO BE CONFIRMED. DESIGN TO BE ADJUSTED IF REQUIRED TO AVOID IMPACT.

SEE NOTE 5

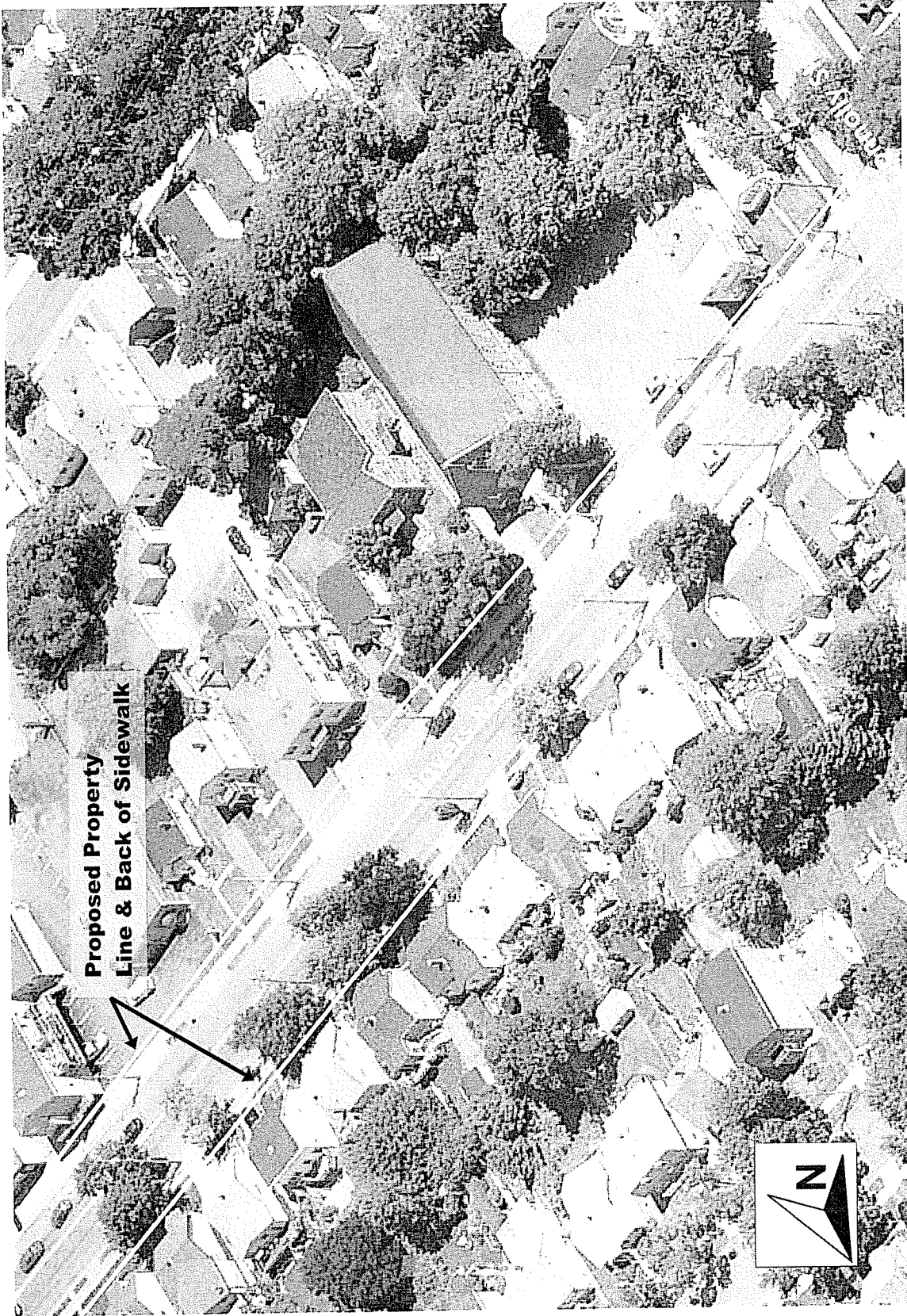


		PROJECT NO. 20639	SHEET 05b SCALE: 1:1000
		TITLE CONCEPTUAL PLAN BAYERS ROAD - 5b TRANSITION AREA ALTERNATIVE 2	PROJECT BAYERS ROAD / HIGHWAY 102 CORRIDOR STUDY COMPONENT 2
DATE MARCH 2010	SEE NOTE 5		

LEGEND AND NOTES

- NUMBER OF LANES AND DIRECTION OF TRAFFIC
- LANE LINES (WHITE DASHED LINES)
- EDGE LINES (SOLID WHITE OR YELLOW LINES)

1. DESIGN IS CONCEPTUAL ONLY BASED ON 2036 HORIZON YEAR TRAFFIC PROJECTIONS.
2. TRANSITION AREA FROM BAYERS ROAD TO HIGHWAY 102, 3 INBOUND LANES AND 3 OUTBOUND LANES PROPOSED.
3. CN CROSSING STRUCTURE BRIDGE 2 TO BE REPLACED/WIDENED. BRIDGE 1 TO BE REMOVED.
4. CLEAR WIDTH UNDER BRIDGE 3 TO BE CONFIRMED TO ALLOW DESMOND STREET WIDENING.
5. LOCATION OF CEMETERY ON THE NORTH SIDE OF BAYERS ROAD TO BE CONFIRMED. DESIGN TO BE ADJUSTED IF REQUIRED TO AVOID IMPACT.



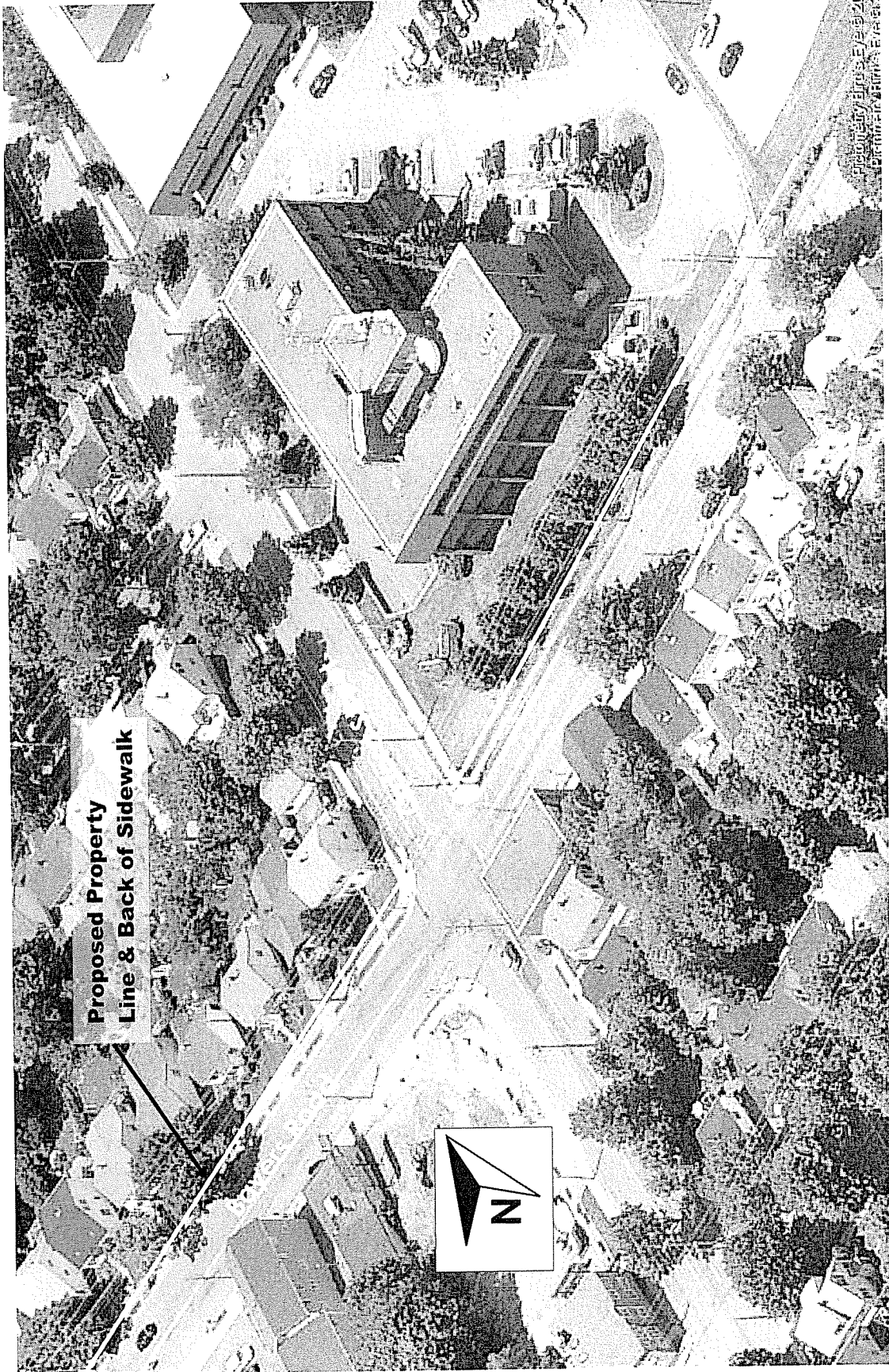
Feb. 28, 2011

Bayers Road / HWY102 Corridor Study

ATTACHMENT B

Figure 1: Bayers Road - Connolly Street to Windsor Street

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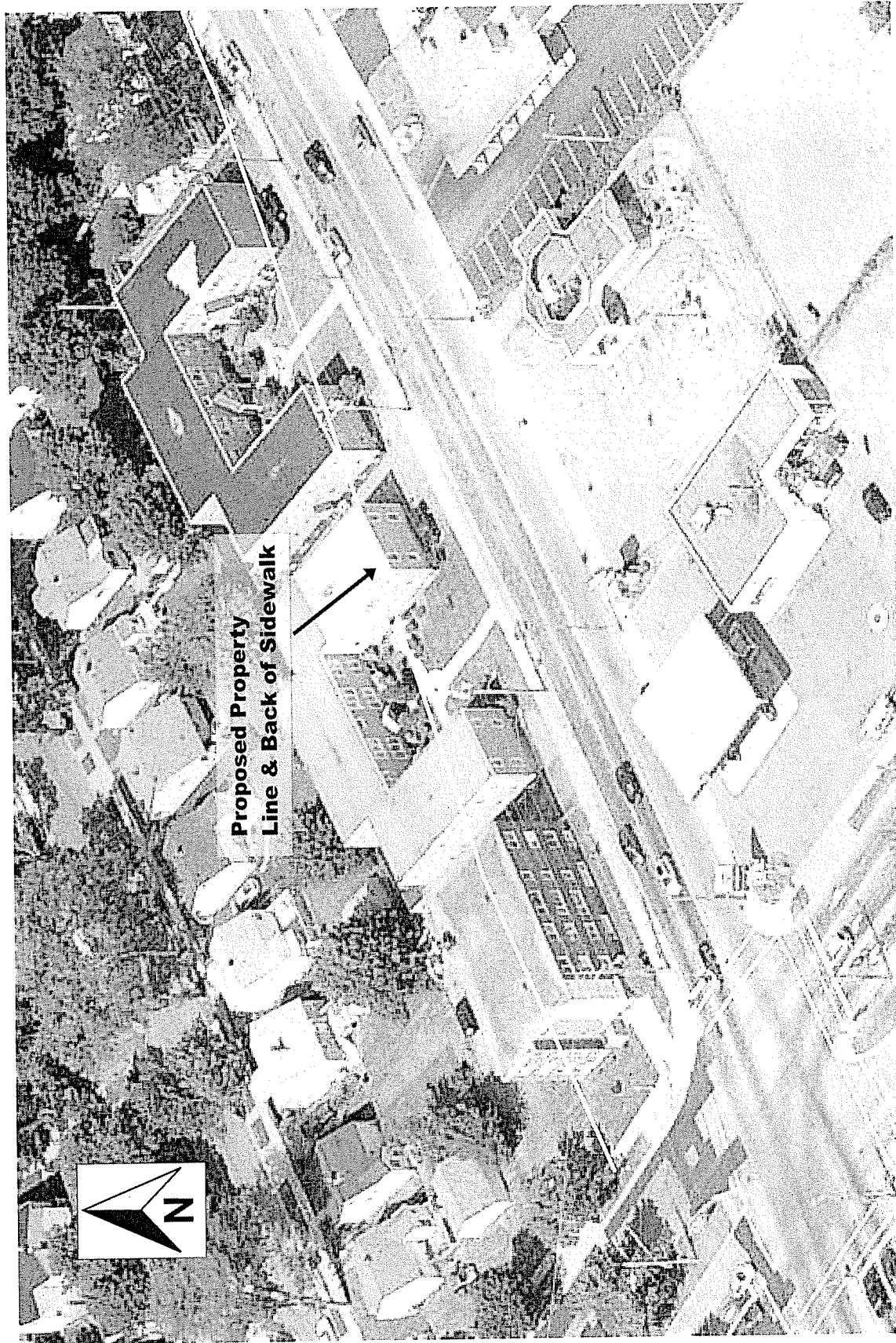
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Bayers Road / HWY102 Corridor Study

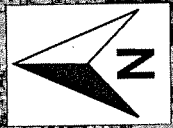
ATTACHMENT B

Figure 2: Bayers Road - Windsor Street to Oxford Street





**Proposed Property
Line & Back of Sidewalk**



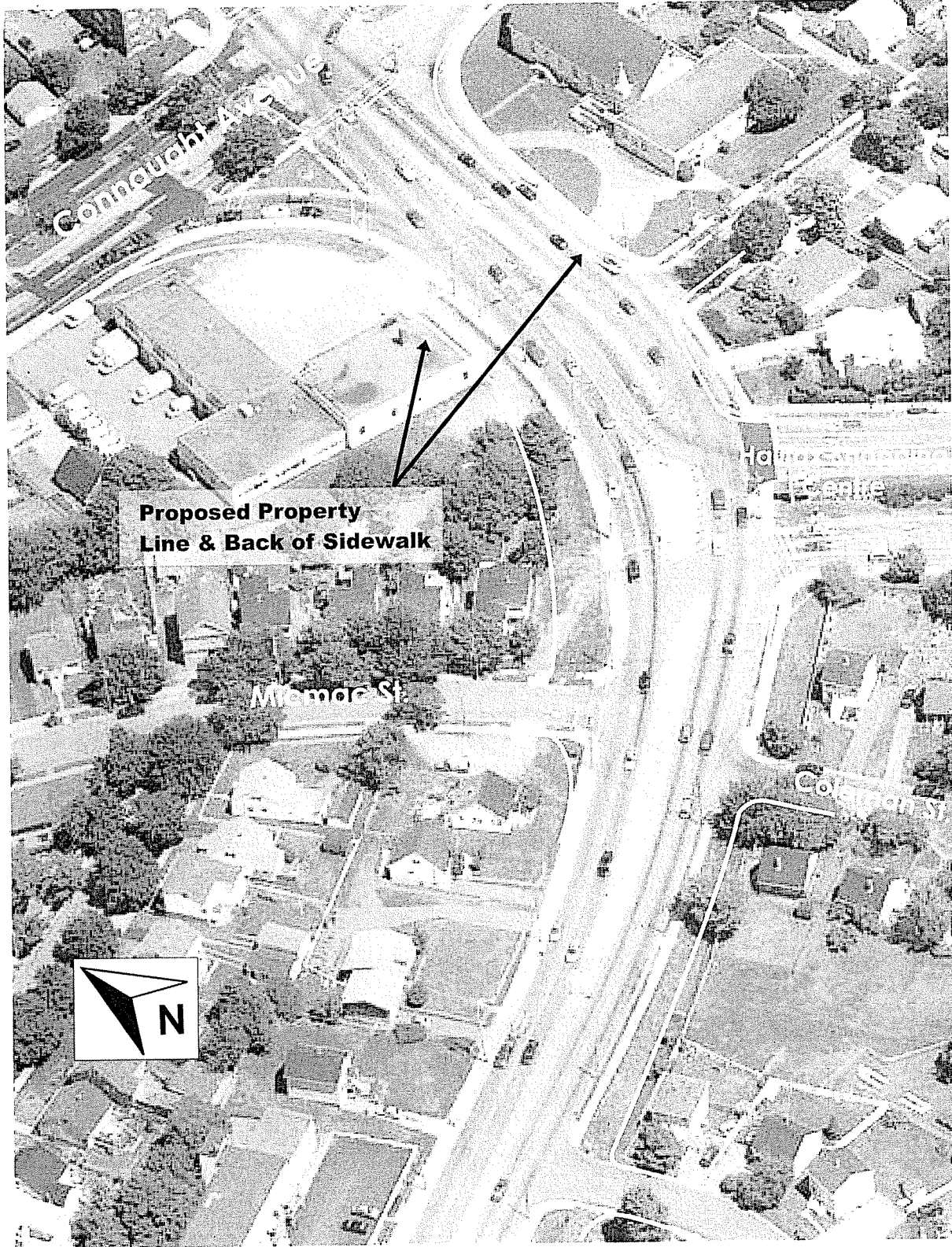
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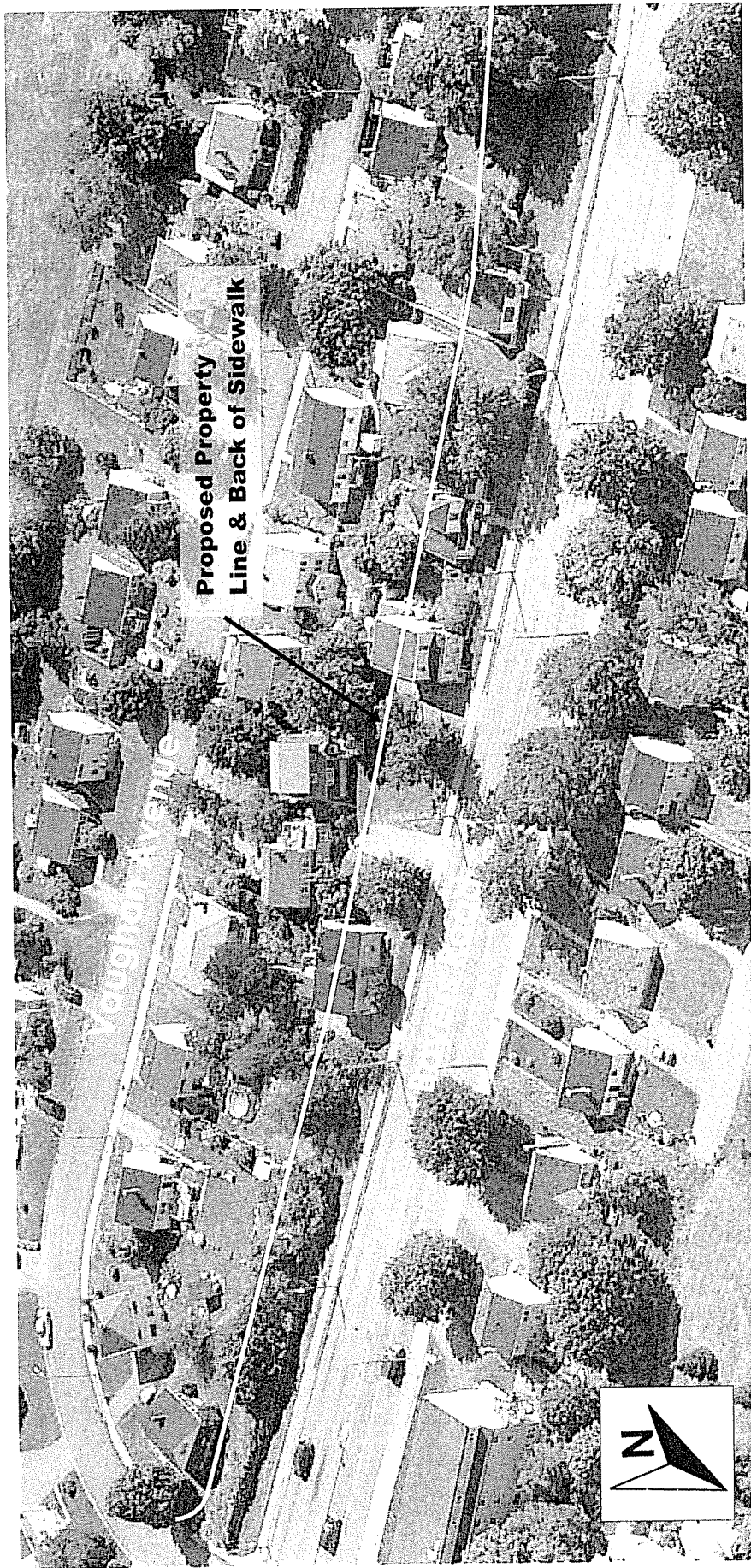
Bayers Road / HWY102 Corridor Study

ATTACHMENT B

Figure 3: Bayers Road at Connaught Avenue







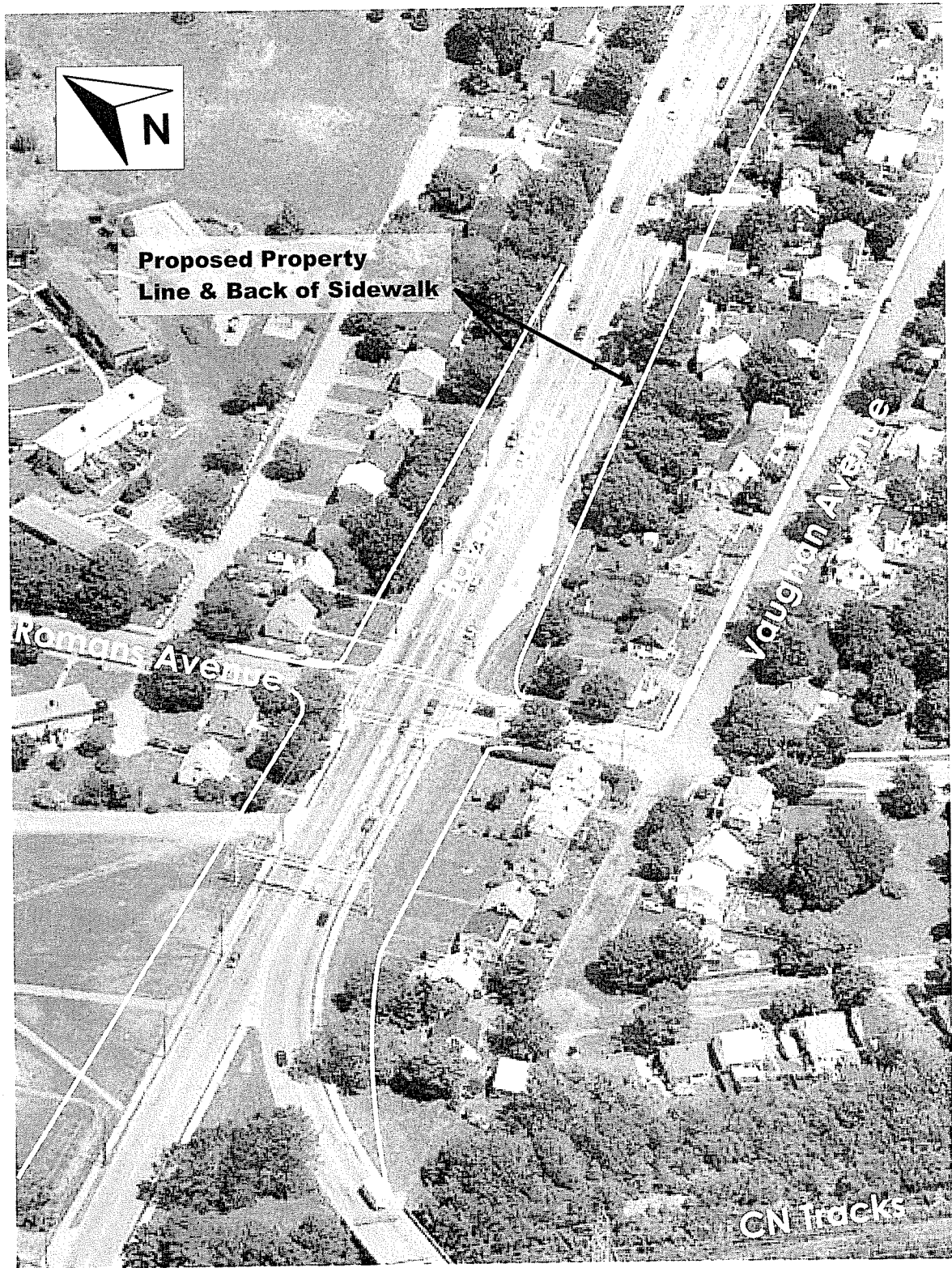
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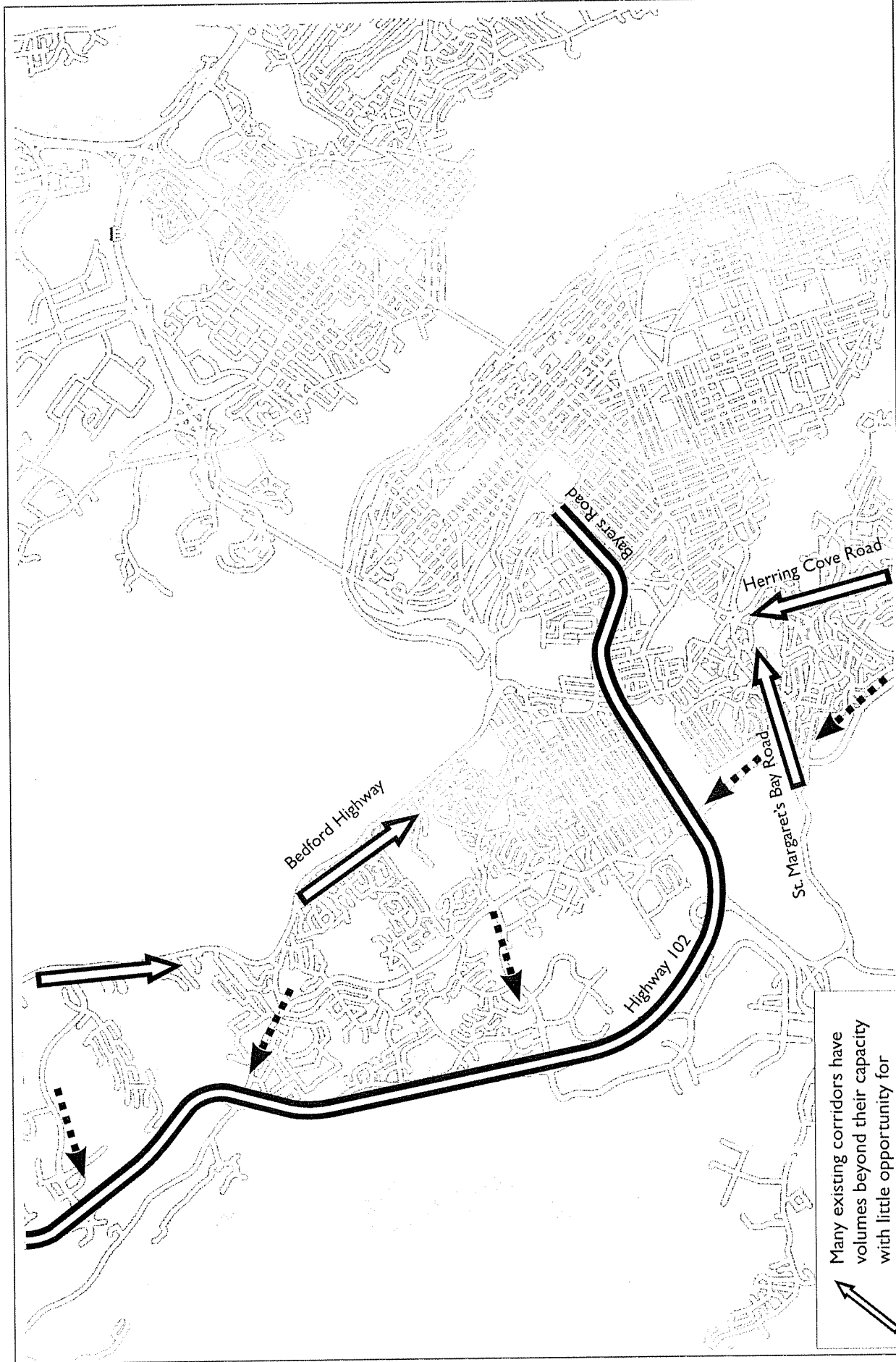
Bayers Road / HWY102 Corridor Study



ATTACHMENT B

Figure 5: Bayers Road - Vaughan Ave to Romans Ave

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 Many existing corridors have volumes beyond their capacity with little opportunity for expansion
 Access to the Hwy 102 corridor is available but underused due to congestion at Bayers Road

Bayers Road / Highway 102 Corridor Study ATTACHMENT C	Date
HALIFAX REGIONAL MUNICIPALITY Traffic Shifting to Bayers/Hwy 102 Corridor	