

Our File/N/Réf. **50 23-00-R015-H**
Your File/V/Réf.

DATE 28 April 2000

TO/DEST. Co-ordinator Transportation Committee

FROM/EXP. Director Mobility Services and Corporate Fleet Services
 Environment and Transportation Department

SUBJECT/OBJET **MODIFICATIONS TO WOODROFFE AVENUE (REGIONAL
ROAD 15) TO CONSTRUCT A NEW INTERSECTION AS PART
OF THE STRANDHERD DRIVE REALIGNMENT IN SOUTH
NEPEAN**

DEPARTMENTAL RECOMMENDATIONS

That the Transportation Committee recommend Council approve the functional design for the modifications to Woodroffe Avenue (Regional Road 15) as illustrated in Annexes 'C' and 'D', subject to the City of Nepean;

- a) funding the total cost of the proposed road works and traffic control signal installation, and;**
- b) executing a Legal agreement with respect to (a) above.**

BACKGROUND

Strandherd Drive will ultimately extend from Highway 416 to the Rideau River with construction to be completed in phases. In 2000, the City of Nepean proposes to construct the section between Greenbank Road (Regional Road 13) and east of Woodroffe Avenue (Regional Road 15). The work includes the construction of a new signalized intersection of realigned Strandherd Drive and Woodroffe Avenue, south of the existing intersection of Woodroffe Avenue and Deerfox Drive (formerly Strandherd Drive)/Stoneway Drive, as shown on Annex 'A'.

The Strandherd Drive arterial road is identified in Schedule 'C1' of the Regional Official Plan as a "Proposed Regional Road" in the Future Regional Roads Plan.

Development in South Nepean has reached the population level that requires the proposed construction to be completed in order to remove excessive through traffic from existing neighbourhoods in Longfields Community and to provide additional east-west traffic capacity resulting from the rapid growth of employment in the South Merivale Business Park. The first stage proposed for year 2000 is construction of a two-lane urban roadway on the north half of an ultimate four-lane divided urban arterial (4UAD).

DISCUSSION

Modifications to the Woodroffe Avenue roadway are required to accommodate a new arterial road crossing at realigned Strandherd Drive as part of a staged implementation of the ultimate network of east-west arterial corridors serving South Nepean.

EXISTING CONDITIONS

Pedestrians

There are no sidewalks along Woodroffe Avenue south of the Nepean Sportsplex. The roadway is constructed as a rural section with no curbs and open ditch drainage.

At the existing intersection of Woodroffe Avenue and Strandherd Road/Stoneway Drive, approximately 600 metres north of this site, pedestrian volumes recorded on 18 August 1999 indicate a total of 29 pedestrians during the eight hour count travelling along Woodroffe Avenue, while 84 pedestrians crossed Woodroffe Avenue at the intersection.

Bicycles

Schedule 'F' of the Official Plan of the Region of Ottawa-Carleton indicates that both Woodroffe Avenue and realigned Strandherd Drive are designated as 'On-Road' cycling facilities. Cycling facilities have not yet been implemented on Woodroffe Avenue in South Nepean; however, an Environmental Assessment and Preliminary Design Study is currently in progress and scheduled for completion in December 2000. This study includes the location of cycling facilities within the Woodroffe corridor from Fallowfield Road to realigned Strandherd Drive. Cycle lanes will be implemented between the through lane and right turn auxiliary lane on the southbound and westbound approaches to the intersection. Widened through lanes will be provided on other approaches.

Bicycle volumes recorded on 18 August 1999 (dry conditions) at the existing Strandherd/Woodroffe intersection determined that 9 cyclists travelled northbound on Woodroffe Avenue and 8 cyclists travelled southbound during the eight hour count while 6 and 17 cyclists crossed Woodroffe Avenue eastbound and westbound respectively during the same eight hour period.

Transit

At present there is no transit service available on Woodroffe Avenue at this location.

Automobiles

This location is not presently an intersection. The posted speed on Woodroffe Avenue is 80 km/hr.

At the nearest intersection approximately 600 m north of the new road crossing, peak hour traffic volumes were recorded on 18 August 1999 between 5:00 p.m. and 6:00 p.m. as follows:

LOCATION	VEHICLE MOVEMENT	
Woodroffe Avenue	Southbound through	165
	Southbound left	136
	Southbound right	139
Woodroffe Avenue	Northbound through	164
	Northbound left	16
	Northbound right	25

DESIGN PROPOSAL

The City of Nepean requests that the Transportation Committee approve the proposed new intersection and roadway modifications to Woodroffe Avenue as illustrated in Annex 'C' and 'D'. The new construction and modifications consist of the following:

- . North leg: - addition of one dedicated left-turn lane, one dedicated right-turn lane and a cycle lane.
- . South leg: - addition of one dedicated left-turn lane.
- . East leg: - construction of three new approach lanes for automobiles consisting of separately designated left turn, through and right-turn lanes and a cycle lane between the right turn and through lanes
- construction of a new single shared use through exit lane (eastbound autos and bicycles).
- . West leg: - construction of two new approach lanes consisting of a designated left-turn lane and a combined through/right-turn lane of extra width to accommodate shared use with cyclists.
- construction of a new single shared use through exit lane (westbound autos and bicycles).

- Road widenings and transitions to accommodate lane development for left and right-turn lanes.
- All corners have been designed to accommodate the turning movement of a tractor semi-trailer.
- Traffic control signals will be designed and installed to accommodate all movements.

Pedestrians

As noted above, there are no pedestrian facilities on Woodroffe Avenue anywhere in South Nepean. This issue is being addressed in the current Environmental Assessment and Preliminary Design Study. Sidewalks will presumably be included in the resulting widening and reconstruction program when the roadway is transformed from a rural highway to an urban arterial.

A 2.0 m wide sidewalk will be constructed along the entire north side of the Strandherd Drive project including a crosswalk at the Woodroffe Avenue intersection. The north frontage of Strandherd Drive has been developed for residential use for approximately 50% of the total length of the 2.6 km project. The balance of the north frontage lands are due to begin development this year.

In future, when development along the south frontage takes place, Strandherd Drive will be expanded to a 4 lane divided urban arterial (4UAD) and an additional sidewalk will be similarly provided along the south side.

A short sidewalk section will be constructed connecting the northeast corner of the intersection to Vistapointe Drive.

Bicycles

There are no bicycle lanes on Woodroffe Avenue in South Nepean on this rural road section. The Woodroffe Avenue modifications include a separate bicycle lane for the southbound approach to the intersection and a widened through/right-turn lane in the northbound direction.

A bicycle lane will be installed along Strandherd Drive between the westbound right turn and through movements. A 4.62 m wide through lane in the eastbound direction will be shared by automobiles and bicycles during the period of this 1st stage of arterial roadway development.

In future, when expansion to a four-lane facility is warranted by development growth, this 1st stage roadway will become the westbound half of a 4UAD and will be re-configured into two through lanes plus a separate designated bicycle lane 2.0 m in width in both directions.

Transit

There is no transit service available at the proposed intersection at this time. However, OC Transpo is currently undertaking public consultation on proposed route changes which could introduce service at this intersection in June 2001 or possibly even earlier. Transit service at this intersection would be important for serving new housing developments which are beyond range of the existing transit service. The intersection will be designed to accommodate buses and bus stops.

Automobiles

Analysis based on year 2004 projections shows that with the above-noted new intersection configuration complete with traffic control signals, this new intersection on Woodroffe Avenue will operate at an acceptable level of service.

CONFORMITY TO THE TRANSPORTATION MASTER PLAN

The guiding principle from the Transportation Master Plan (TMP) is the provision of a modal hierarchy with emphasis on walking, cycling and transit usage. This principle will be reflected in the detailed intersection design which will incorporate sidewalks, pedestrian crossings, traffic signals and cycling lanes in a staged sequence of corridor development to match growth in South Nepean.

Sidewalks will be provided on the north side of the new Strandherd Drive corridor with a crossing at Woodroffe Avenue. Future expansion of the corridor will provide a sidewalk along the south side of Strandherd Drive including a crossing at Woodroffe Avenue.

Sidewalks on Woodroffe Avenue will not be provided until they either become part of a reconstruction and widening of Woodroffe Avenue, or until the current preliminary design study has been completed and a determination is made of the exact location for sidewalks within this corridor.

The provision of cycling lanes, either shared or exclusive along Strandherd Drive and the modified portion of Woodroffe Avenue, conforms with the direction of the TMP which designates Strandherd Drive and Woodroffe Avenue as on-road cycling facilities.

FINANCIAL STATEMENT

Should Regional Council approve the proposed modifications to Woodroffe Avenue, the City of Nepean will be responsible for 100% of the cost of roadway widening and installation of traffic signals.

Cost Estimates

The following cost estimates, prepared by Nepean Capital Works staff, are preliminary and based on functional design details. They are provided solely for the information of the Transportation Committee and Regional Council.

<u>Item</u>	<u>Cost Estimate</u>
Construction (Woodroffe Avenue)	\$ 300,000
Traffic Control Signals	\$ 125,000
Engineering	\$ 50,000
Contingencies	<u>\$ 35,000</u>
Total Estimated Cost	\$ 510,000

CONSULTATION

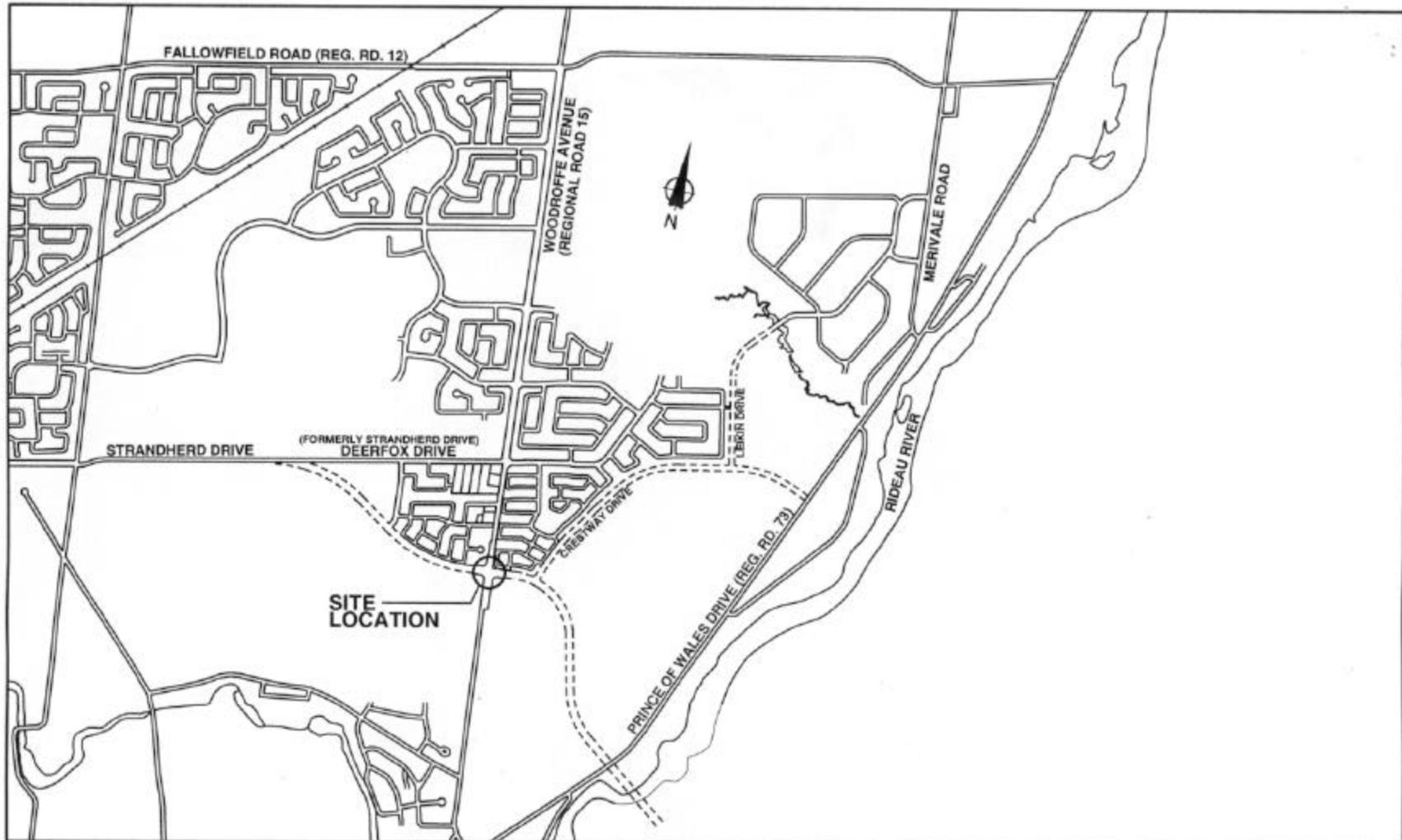
The creation of a new intersection of Strandherd Drive and Woodroffe Avenue was part of a Class Environmental Assessment (Schedule 'C') study undertaken by the Regional Municipality of Ottawa-Carleton in 1989 entitled "Rideau River Bridge - Location Feasibility Study - Strandherd Drive/Armstrong Road". The study included public consultation in the form of three separate Public Information Centres in 1990 that were advertised in both major regional newspapers and several local papers. The Environmental Study Report (ESR) was advertised as 'completed' on 20 March 1993 and resulted in a 'bump-up' request filed by South Nepean Development Corporation which was subsequently denied by the Minister on 20 July 1993, subject to an Addendum being adopted.

Addendum No. 1 to the ESR was confined to issues concerning a proposed realignment of Regional Road 73 (formerly Highway 16). The completed Addendum No. 1 was advertised as 'Issued' on 10 January 1998 with an appeal period extended to 27 February 1998 when it became 'final' due to no further objections being received. During this review period, the ESR with Addendum No. 1 was also part of a Public Open House meeting held on 04 February 1998 concerning environmental assessment of all proposed projects resulting from the Regional Official Plan Review and the Transportation, Water and Wastewater Master Plans. No comments were received.

Approved by
Doug Brousseau

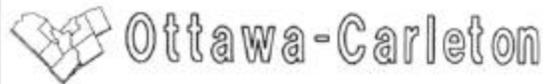
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Attach. (4)



SITE LOCATION

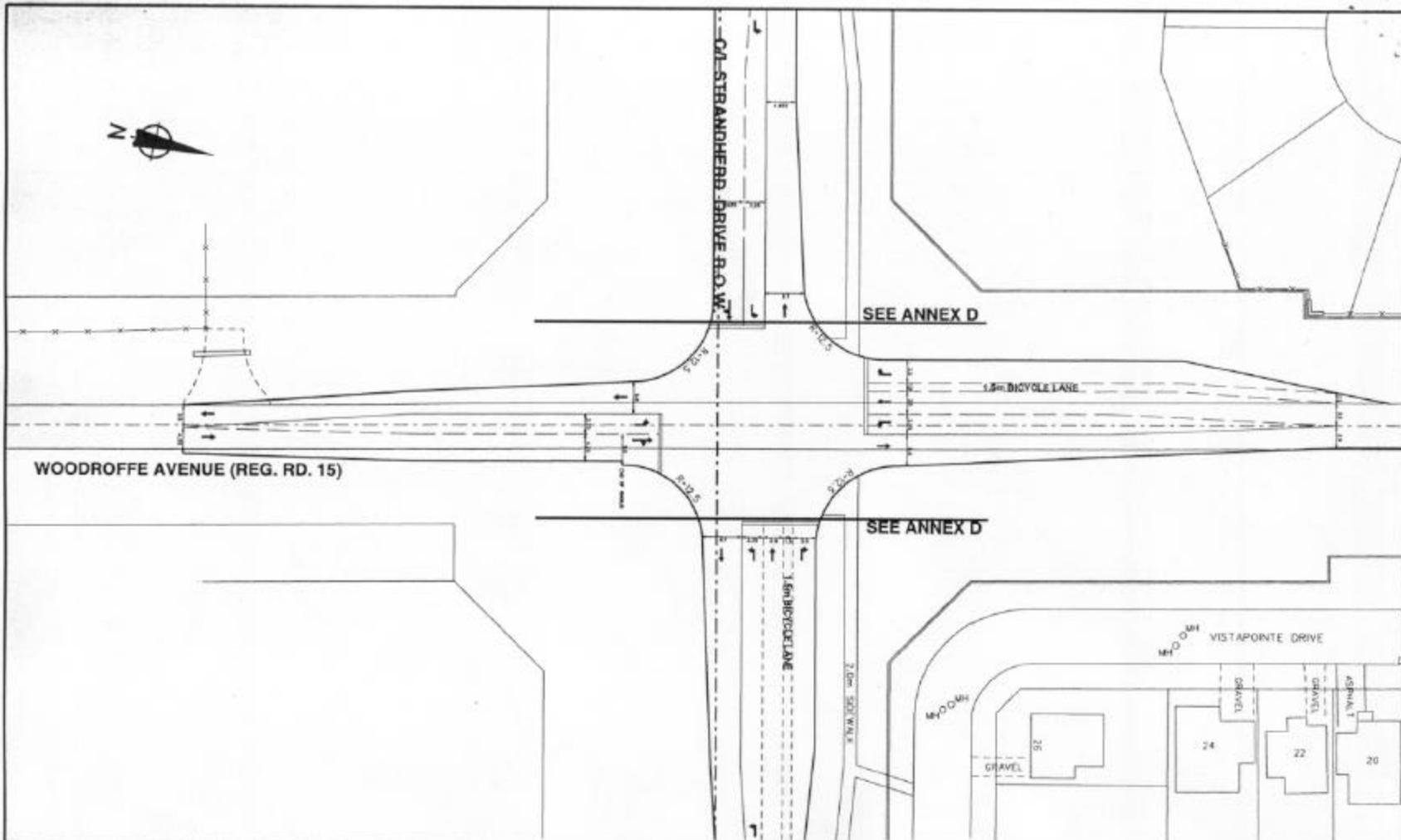
STRANDHERD DRIVE
REALIGNMENT
WOODROFFE AVENUE
INTERSECTION



SCALE:
MARCH 2000

DATE:
N.T.S.

ANNEX A



PRELIMINARY DESIGN
WOODROFFE AVENUE
AT
STRANDHERD DRIVE

STRANDHERD DRIVE
REALIGNMENT
WOODROFFE AVENUE
INTERSECTION

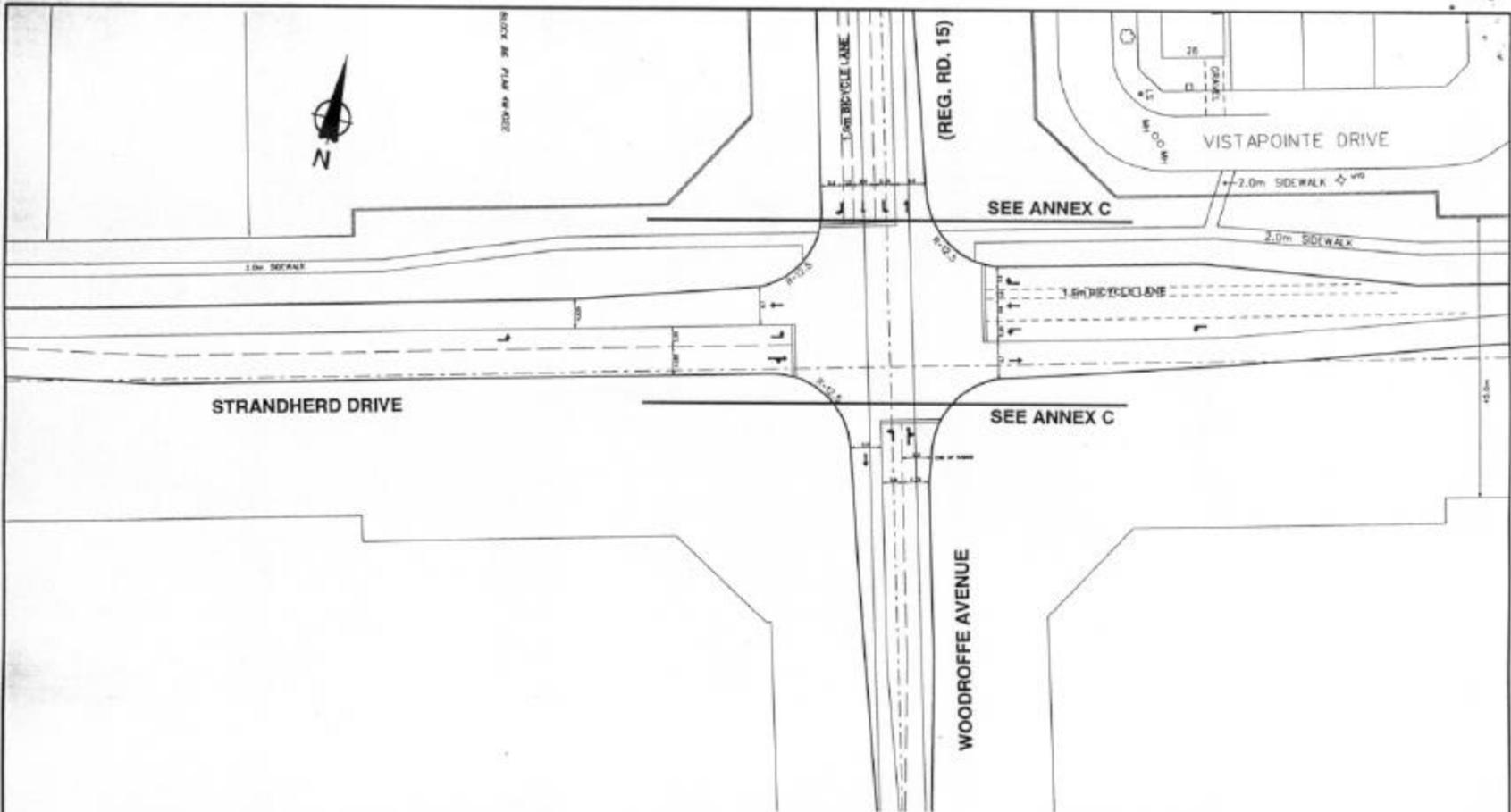


Ottawa-Carleton

SCALE:
MARCH 2000

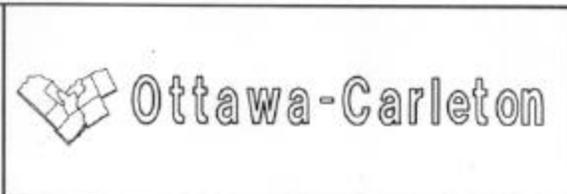
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ANNEX C



PRELIMINARY DESIGN
 STRANDHERD DRIVE
 AT
 WOODROFFE AVENUE

STRANDHERD DRIVE
 REALIGNMENT
 WOODROFFE AVENUE
 INTERSECTION



SCALE:	MARCH 2000
DATE:	N.T.S.
ANNEX D	