

Office Copy.



CONSULTING ENGINEERING SERVICES FOR
THE CITY OF NORTH YORK - TRANSPORTATION DEPARTMENT

DOWNTOWN PLAN SOUTH OF SHEPPARD AVENUE

ENVIRONMENTAL STUDY REPORT

TRANSPORTATION
INFRASTRUCTURE
REQUIREMENTS

RECEIVED
SEP 06 1996
PLANNING DEPT.

SEPTEMBER, 1996





CONSULTING ENGINEERING SERVICES FOR
THE CITY OF NORTH YORK - TRANSPORTATION DEPARTMENT

DOWNTOWN PLAN SOUTH OF SHEPPARD AVENUE

ENVIRONMENTAL STUDY REPORT

TRANSPORTATION
INFRASTRUCTURE
REQUIREMENTS

SEPTEMBER, 1996

TABLE OF CONTENTS

	<u>Page No.</u>
E Executive Summary	i
E.1 Purpose Of The Undertaking.....	i
E.2 Project Study Area.....	i
E.3 The Environmental Assessment.....	i
E.4 Related Studies.....	i
E.5 Problems and Opportunities.....	iii
E.6 Alternative Solutions to the Problem.....	iv
E.7 Alternative Designs.....	v
E.8 Evaluation of Alternatives.....	ix
E.9 Consultation.....	xiii
E.10 Recommendations.....	xv

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 INTRODUCTION	1
1.1 Background	1
1.2 Purpose Of The Undertaking	3
1.3 Limitations to the Study.....	3
1.4 Project Study Area	4
1.5 Development Principles for the Downtown Area South of Sheppard Avenue	4
1.5.1 Development Objectives.....	4
1.5.2 Transportation Infrastructure Strategy.....	6
1.5.3 South Downtown Eastern Boundary.....	7
1.5.4 Staging of Development	7
1.6 Related Studies.....	8
1.7 Class EA Process And Rationale.....	8
1.8 Environmental Study Report	10
1.9 Study Team	11
2.0 PUBLIC PARTICIPATION	12
2.1 Introduction.....	12
2.2 Stakeholders.....	12
2.3 Overall Consultation Process.....	14
2.4 Public Participation.....	14
2.4.1 Start-Up Notice	14
2.4.2 Joint Notice.....	15
2.4.3 Public Information Centre #2	15
2.5 Specific Response.....	16
3.0 EXISTING AND FUTURE CONDITIONS.....	18
3.1 Existing Environment.....	18
3.1.1 Natural.....	18
3.1.2 Existing Land Use	18
3.1.3 Heritage Features.....	19
3.1.4 Transportation	19
3.2 Proposed Development.....	20
3.2.1 Official Plan Amendment 393	20
3.2.2 Specific Development Applications.....	20

TABLE OF CONTENTS

	<u>Page No.</u>
4.0	PROBLEM STATEMENT AND ALTERNATIVE SOLUTIONS.....23
4.1	Problems and Opportunities23
4.2	Alternative Solutions to the Problem.....24
4.2.1	Do Nothing.....25
4.2.2	Transit Improvements.....25
4.2.3	Roadway Improvements26
4.2.5	Conclusions28
4.3	Issues and Concerns29
5.0	ALTERNATIVE DESIGNS30
5.1	Introduction.....30
5.2	Road Network Design Objectives.....30
5.3	The Alternatives.....31
5.4	Evaluation Criteria and Analysis of Alternatives.....31
5.5	Evaluation of Alternatives.....34
5.6	Recommendations38
5.7	Issues and Concerns38
6.0	THE RECOMMENDED DESIGN40
6.1	Roadway.....40
6.1.1	Cross-Section40
6.1.2	Horizontal Alignment.....40
6.1.3	Vertical Alignment.....40
6.2	Proposed Drainage System.....40
6.3	Right-of-Way Requirements.....42
6.4	Utilities.....42
6.5	Preliminary Construction Cost Estimate.....43
6.6	Noise.....44
6.7	Air Quality.....46
6.8	Mitigation at the Doris Avenue/East Service Road and Sheppard Avenue Intersection46
6.9	Potential Environmental Impacts and Mitigation Measures47
6.10	Commitments to Further Work47

TABLE OF EXHIBITS

	<u>Page No.</u>
1.1 North York Centre.....	2
1.2 Project Study Area	5
1.3 Class Environmental Assessment Process.....	9
2.1 Study Process.....	13
3.1 Proposed Recommended Densities in OPA 393.....	21
4.1 Alternative Road Alignments.....	27
5.1 The Midblock Alternative	32
5.2 The Tradewind Alternative	33
5.3 Analysis of Alternatives.....	35
6.1 Typical Cross-Section for East Service Road	41
6.2 Parking Reconfiguration For North York Square	48

APPENDICES (Bound Under Separate Cover)

Appendix A	Environmental Assessment Study - Status Report
Appendix B	Traffic Report
Appendix C	Noise Impact Assessment for the Proposed East Service Road
Appendix D	Air Quality Assessment for the East Service Road North York, Ontario

E EXECUTIVE SUMMARY

E.1 PURPOSE OF THE UNDERTAKING

The purpose of this undertaking is to identify the transportation infrastructure that is needed to support the development levels associated with Official Plan Amendment No. 393 of the Downtown Plan south of Sheppard Avenue and within the context of the ultimate development of the North York Centre.

E.2 PROJECT STUDY AREA

For the purposes of the Downtown Area south of Sheppard Avenue and this report, the overall study area is depicted in **Exhibit E.1**. The study area encompasses all areas that might potentially be impacted by the roadway infrastructure alternatives.

E.3 THE ENVIRONMENTAL ASSESSMENT

This executive summary is a part of the Environmental Study Report (ESR) which represents the documentation that is required in accordance with the Class Environmental Assessment (Class EA) for Municipal Road Projects. The documentation of the planning and design process followed in developing a Schedule "C" project is a mandatory requirement of the Class EA process.

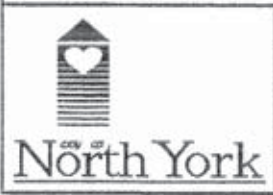
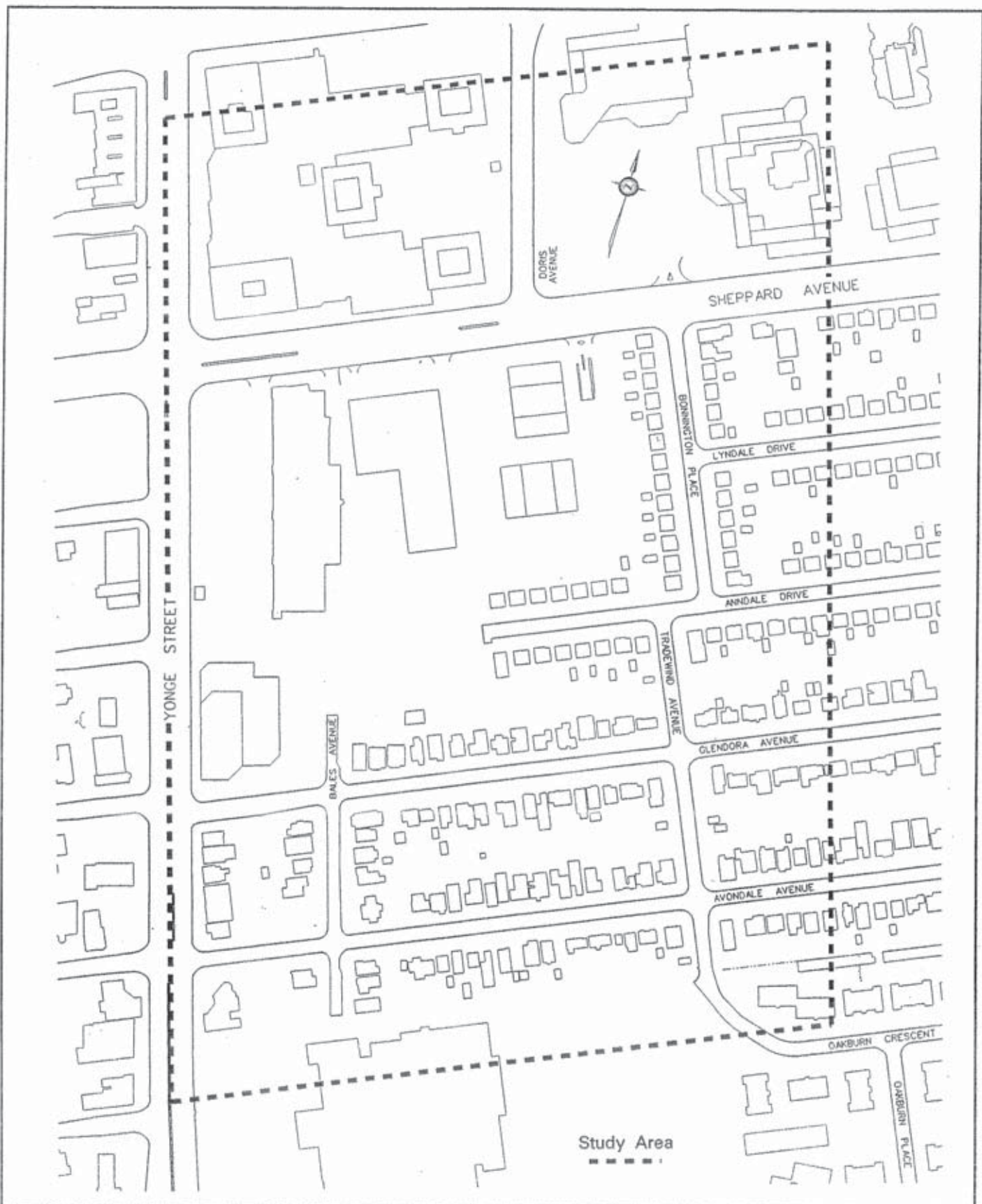
This ESR includes the identification of the need for the project, discussion of the design approach and proposed method of mitigation to minimize the impacts on the natural, social and economic environments.

The ESR is prepared for the public record and provides the opportunity for the public to review the planning process and provide input.

A "master planning" approach was employed as a means to integrate environmental considerations of the transportation infrastructure with land use planning. From this comprehensive approach, a balance between transportation planning and environmental assessment requirements is achieved. Individuals that are interested in the final outcome of the Master Plan process are encouraged to review the OPA application in conjunction with the Class EA.

E.4 RELATED STUDIES

In late 1994 and early 1995, work was carried out on a Secondary Plan for the South Downtown planning area. The infrastructure for higher development levels will be protected through development design as a long term "vision" for the Downtown area south of Sheppard Avenue.



PROJECT STUDY AREA

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER
E.1

The infrastructure required in support of the overall "vision" is not the subject of this report. Analysis of those requirements was carried out in 1994/95 and was, in part, the basis for Council's decision to scale back development in July, 1995. The analysis is documented in a Status Report (October, 1995) submitted to the North York Transportation Department and is available as a background document (Appendix A).

Individuals are encouraged to review OPA 393 and all relevant background documentation in conjunction with this report.

E.5 PROBLEMS AND OPPORTUNITIES

OPA 393 envisions higher density development along the major road frontages of Highway 401, Yonge Street and Sheppard Avenue. Traffic volumes on these roads is significant particularly during peak hours. Although implementation of the Sheppard Subway will improve transit use to the area and assist the target modal split of 60 percent transit to be achieved, more vehicular traffic will occur as development continues in the North York Centre.

As stated in Section E.1, the purpose of the undertaking is to provide the transportation network in support of the development levels of the North York Downtown Plan south of Sheppard Avenue in the context of the ultimate development of the North York Centre.

The road network should:

- i) Complete the link with respect to the Downtown service road within the southeast quadrant of Yonge/Sheppard in the North York Centre as identified in the Official Plan. This link will consist of the widening of Avondale Avenue, and the introduction of a new east service road;
- ii) Improve traffic circulation and provide capacity in support of recommended development;
- iii) Facilitate the flow of traffic to and from existing and future development in the Downtown Area south of Sheppard Avenue allowing arterial roads to carry through traffic;
- iv) Alleviate heavy turning movements at Yonge/Sheppard, Doris/Sheppard and Avondale/Yonge;

- v) Create road frontage for internal development blocks in the Downtown Area south of Sheppard Avenue;
- vi) Provide improved access to existing and future development;
- vii) Help protect stable residential areas from traffic infiltration;
- viii) Help provide certainty in terms of how the development plans will be accommodated by delineating a boundary;
- ix) Not preclude possible roads and future development consistent with improved access to Highway 401; and,
- x) Protect for longer term transportation capacity requirements.

The above objectives form the need and justification for this undertaking.

E.6 ALTERNATIVE SOLUTIONS TO THE PROBLEM

Development of the North York Centre which includes that area south of Sheppard Avenue is consistent with the Metropolitan Toronto Official Plan to create a metropolitan centre along Yonge Street from Highway 401 to Cummer/Drewry. The principles for development of the Downtown Area south of Sheppard Avenue, as set out by the City in January 1996, supplement the overall development policies of the City.

Together, these policies and principles establish the need to consider alternative transportation solutions. These solutions are intended to support the future development by responding to the problems and opportunities as previously identified.

The following alternative solutions have been considered:

- Do Nothing - This alternative would result in severe and unacceptable congestion on Yonge Street and the connecting arterial roads, leading to extensive traffic infiltration into the adjacent neighbourhoods;
- Transit Improvements - A transit modal split of 60% has been assumed for the North York Centre which corresponds with other development nodes (e.g. Yonge/Bloor, Eglinton/Yonge, etc.). It is unlikely that the assumed transit modal split will be exceeded; and,

- Roadway Improvements - This includes widening to existing roads, intersection improvements, and new roads. Four road alternatives for the east service road were also considered: Bales, Poyntz, Midblock and Tradewind (see Exhibit E.2). Only the Midblock and the Tradewind alternatives adequately address the problems and opportunities previously identified.

On the basis of the above, roadway improvements were recommended as the best alternative solution and were carried forward.

E.7 ALTERNATIVE DESIGNS

Roadway networks to include the east service road and Avondale Avenue were developed to meet the future development objectives of the North York Centre as a whole. The objectives of this network are outlined below:

East Service Road (North-south continuation of the existing Service Road in the Downtown, east of Yonge Street)

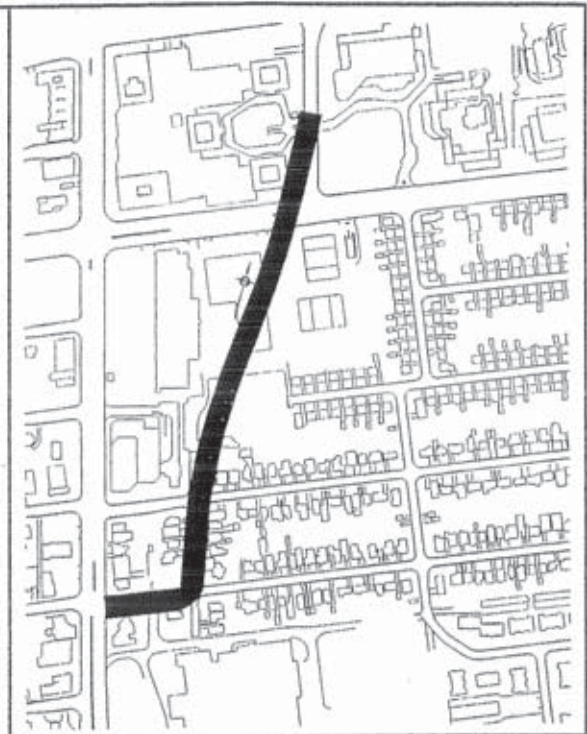
- To connect the road network with Doris Avenue at Sheppard Avenue;
- To allow for future connections to east-west link and Highway 401 ramps at the south end;
- To provide an alignment far enough east of Yonge Street to provide for a signal at Avondale Avenue;
- To provide sufficient capacity to service the proposed development area; and,
- To provide sufficient capacity to allow the road to function as an integral part of the service road network for the entire North York Centre.

Capacity analysis of future traffic projections has shown the need for four lanes on the east service road with five lanes at the Doris Avenue and Sheppard Avenue intersection. On Avondale Avenue, four lanes are required for through movement capacity, with five lanes at Yonge Street and five lanes at the intersection with the east service road. The distance which the five lane cross-section extends from the intersections is such that good engineering design requires a continuous five lane cross-section for the entire length of the widening on Avondale Avenue (from Yonge Street to the east service road).

Using the rationale discussed above, alternative designs were generated. Two alternative road alignments were developed to a preliminary design level of detail for analysis and evaluation: i) the Midblock Alternative and ii) the Tradewind Alternative. These can be seen in Exhibits E.3 and E.4 respectively.



Poyntz Alignment – Dismissed



Bales Alignment – Dismissed



Midblock Alignment
Carry Forward for Evaluation



Tradewind Alignment
Carry Forward for Evaluation

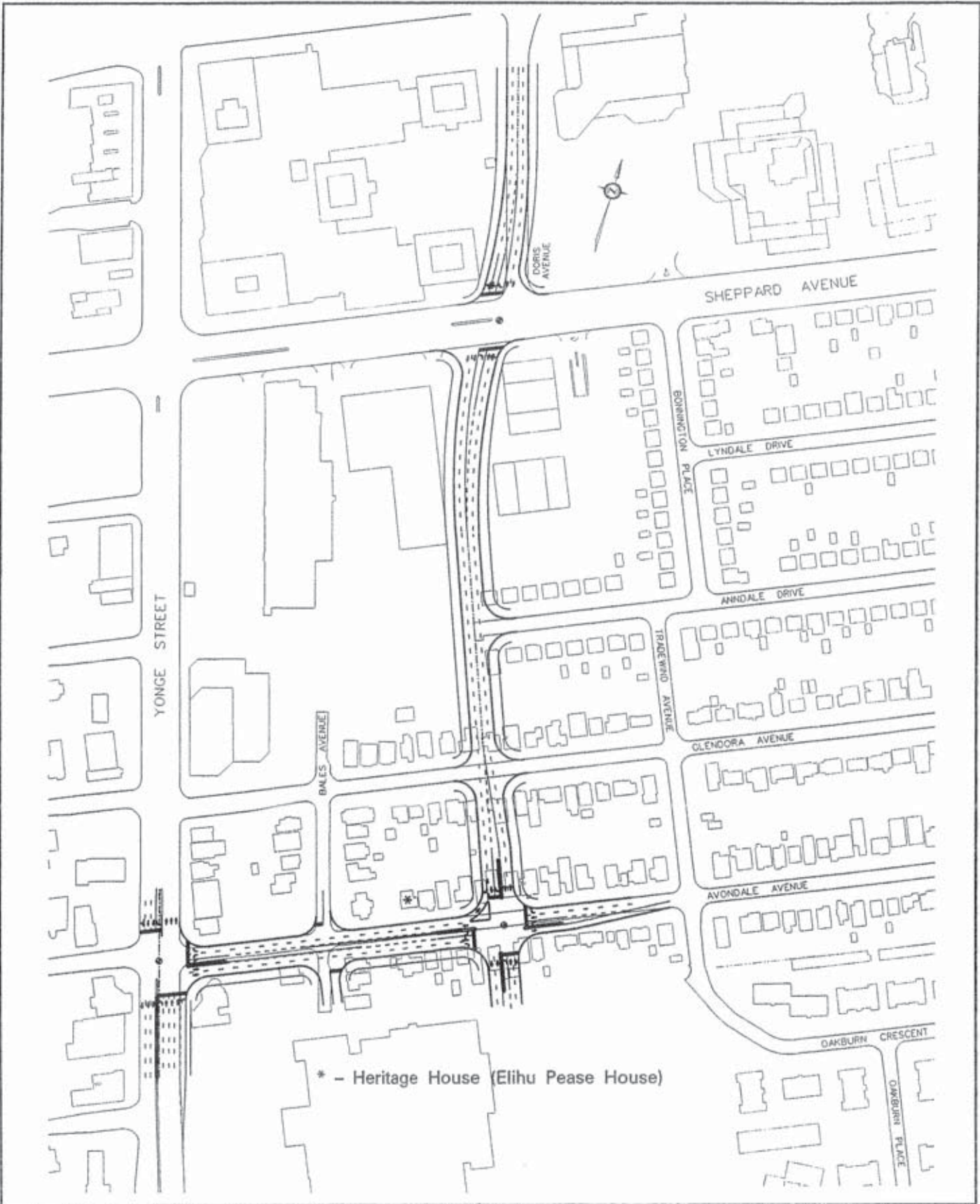


ALTERNATIVE ROAD
ALIGNMENTS

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER

E.2



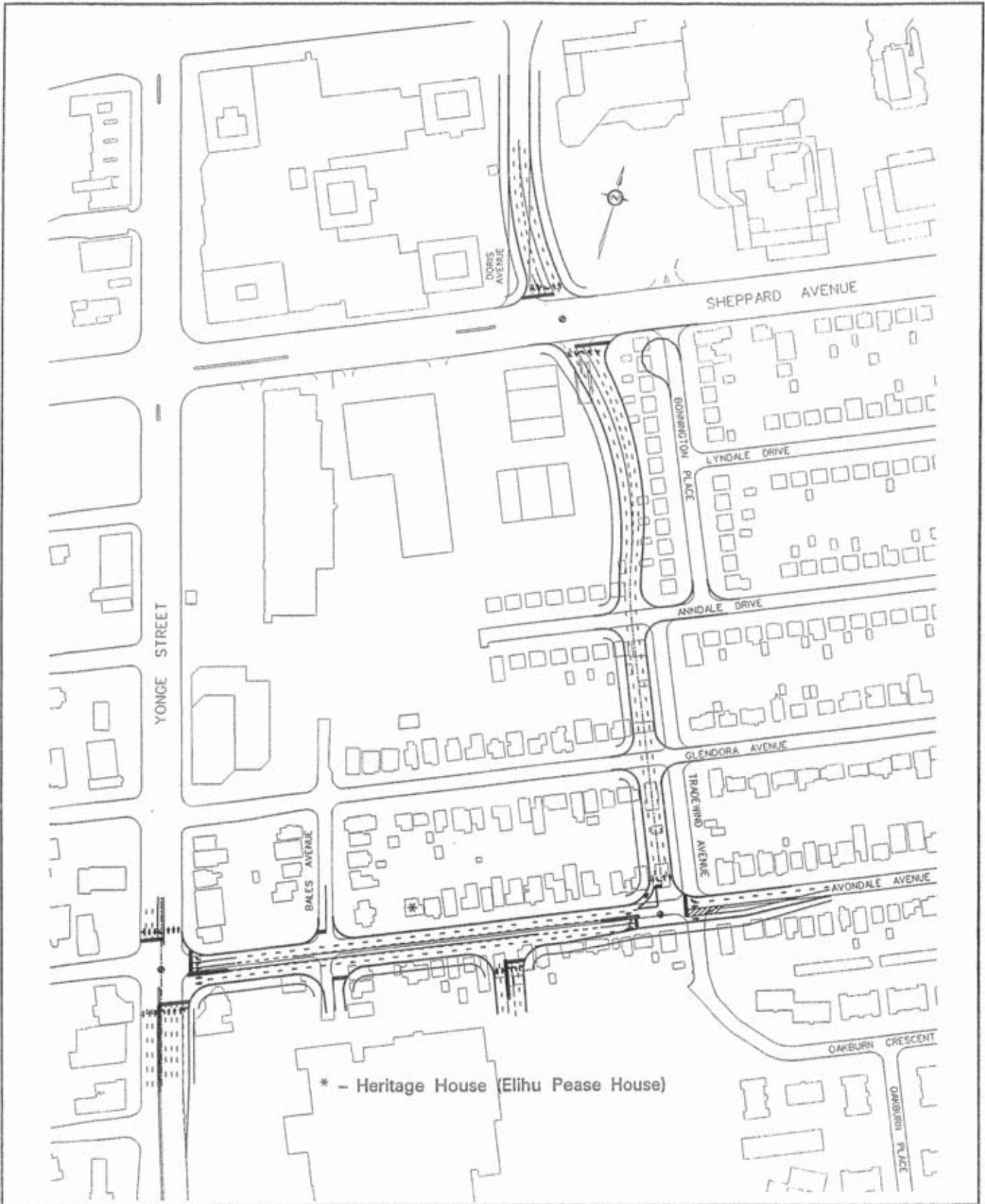
* - Heritage House (Elihu Pease House)



THE MIDBLOCK
ALTERNATIVE

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER
E.3



* - Heritage House (Elihu Pease House)



THE TRADEWIND
ALTERNATIVE

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER
E.4

E.8 EVALUATION OF ALTERNATIVES

The criteria used to evaluate the alternatives were developed by the study team utilizing evaluation factors from the comments received from stakeholders (stemming from initial stakeholder meetings January, 1995) and other relevant Environmental Assessment factors. These factors considered the traffic operations, natural environment, socio-economic environment, cultural environment and the cost of each alternative. The factors were broken down into three groups: i) ability to meet the identified problems/opportunities, ii) impacts to socio-economic environment and iii) indirect impacts (see Exhibit E.5).

Both the Tradewind and the Midblock Alternatives were considered against the various evaluation factors. A table outlining the impacts was used in the evaluation and the eventual selection of a preferred alternative.

The Midblock alternative can be summarized as follows:

- Requires acquisition of fewer homes;
- Requires property acquisition from the Sheppard Centre;
- Requires greater property acquisition from the Marathon development;
- Preserves more of the single family homes within the stable residential area; and,
- Best supports existing planning by being closer to the present Downtown Plan boundary at Yonge Street.

The Tradewind alternative can be summarized as follows:

- Requires acquisition of more homes;
- Requires property acquisition from the Metropolitan Toronto Separate School Board site on the north side of Sheppard Avenue;
- Has less impact on the Marathon development;
- Encroaches further into the present stable residential area; and,
- Is further from the present Downtown Plan boundary at Yonge Street.

In terms of cost, the Tradewind alternative is less expensive than that of the Midblock. However, the direct impacts of either alternative can be mitigated. The difference in cost is not considered significant in choosing between the alternatives.

Part 1: Ability to meet the identified problems/opportunities

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Uncertainty of Future Boundary	Provision of a "hard edge" boundary for the Downtown Plan	Yes	Yes	Re-establish certainty for the future of the stable residential neighbourhood
b) Traffic Circulation Doris Ave. & Sheppard Ave. Intersection - Level of Service - Intersection Geometrics (Skew Angle) East Service Rd. & Avondale Intersection - Level of Service - Intersection Geometrics (Skew Angle) - Avondale Ave. & Yonge St. Intersection - Level of Service - Intersection Geometrics (Skew Angle)	Level of Service (AM/PM) Degrees Level of Service (AM/PM) Degrees Level of Service (AM/PM) Degrees	D/D* 75 B/B** 90 D/D* 85	D/D* 70 B/B** 90 D/D* 85	To provide reasonable traffic operations while supporting Stage 1 development.
c) Potential Transient Traffic (Infiltration)	Potential for traffic infiltration into stable residential area	Low infiltration as good traffic flow provided on service road	Low infiltration as good traffic flow provided on service road	To protect stable residential neighbourhood
d) Consistency with Vision	Ability to provide future connections to/from Hwy. 401	Achieved	Achieved	Allow for further intensification of the Downtown south of Sheppard

* Level of Service D is acceptable

** Level of Service B is good



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

ANALYSIS OF
ALTERNATIVES

EXHIBIT
NUMBER
E.5 A

Part 2: Impacts to Socio-Economic Environment

Part 2 of 3

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Residential Properties Displaced	Number of residential properties requiring total acquisition.	19	32	Social impact to homeowner
b) Residential Properties Disrupted	Number of residential properties partially impacted.	2	1	Social impact to homeowner
c) Business Properties displaced	Number of business properties requiring total acquisition.	0	0	Disruption to business
d) Business Properties impacted by partial acquisition or construction	Number of business properties partially impacted.	4	2	Disruption to business
e) Heritage Features Displaced or Disrupted	Number of heritage features impacted.	0	0	Heritage features are an important part of any community
f) Cost (construction, direct property and direct mitigation)	Today's dollars (1995)	\$12.9 Million	\$12.2 Million	Infrastructure improvements must be paid for



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

ANALYSIS OF
ALTERNATIVES

EXHIBIT
NUMBER
E.5 B

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Noise	Noise level at first row of houses adjacent to road based on ultimate traffic reassignment	64 dBA	62 dBA	To identify potential noise impacts
b) Air Quality	Qualitative Assessment	Within MOEE guidelines for NO ₂ and CO Good	Within MOEE guidelines for NO ₂ and CO Good	To identify potential air quality impacts
c) Access to Community	Qualitative Assessment	Good	Good	Allows stable residential area access to Downtown south of Sheppard
d) Distance from Yonge Street	Distance	200m	300m	Road sets boundary of plan
e) Extent of encroachment into present residential community	Number of homes	22	52	Community preservation
f) Proximity to existing Downtown Plan Boundary (Anndale to Avondale)	Distance	Closer	Farther	Supports approved Downtown Plan
g) Future Open Space	Qualitative Assessment of open space linkage	Provides for future linear park Little opportunity for linkage	Provides for future linear park Provides good connectivity to future parks in Anndale & MSSB properties	To help create buffer between stable residential neighbourhood and development



Through the "Master Plan" approach the direct correlation between the road requirements and the development potential of the "plan" was identified. The Midblock alignment best supports the ultimate development levels of OPA 393 and the North York Centre and is therefore recommended.

E.9 CONSULTATION

Throughout the Master Planning process, North York has undertaken considerable efforts to obtain public input to both the planning initiatives in the Downtown Plan south of Sheppard Avenue and the Class EA. Since early 1992, North York staff and Technical Committees have met with various interested parties, land owner groups and public agencies to elicit feedback as the review progressed. This process involved the initial Public Information Centre required under the Class EA, as well as reports to the Planning Committee and Council, which are of public record. Further, there was a Planning Department newsletter mailed to all stakeholders. Beginning in January of 1995, ten (10) additional stakeholder meetings were held to obtain valuable input.

The overall consultation process consisted of public meetings, workshops, open houses, newsletters, Community Consultation Committee(s) and regular staff reports. There has been an ongoing process of public consultation since 1992, as outlined in the *Environmental Assessment Study, Status Report* (Appendix A). This consultation has helped focus on individual issues as they now relate to this study.

Public Information Centre (PIC) #2 was held on April 23, 1996, between 5:00 p.m. and 9:00 p.m., at the North York City Hall. The purpose of this PIC was to present the following:

- i) Study Process;
- ii) Problem/Opportunity Statement;
- iii) Alternative Solutions to the Problem;
- iv) Alternative Designs;
- v) Analysis and Evaluation; and,
- vi) The Recommendation of the Preferred Alternative.

153 persons attended this meeting, and 44 comment sheets were received at that time. Within two weeks of the PIC, a further 32 responses were received. In total, 53 comment sheets and 23 letters were received by the study team. A summary of the responses is as follows:

Comment Sheets In Favour of:	Midblock	15
	Tradewind	14
	Bales	21
	Route Closest to Yonge Street	7
	Avondale/Willowdale connection	1
	Poyntz	1

Other Comments

Should build service road concurrently with Avondale	16
Against the widening of Avondale Avenue	5
When will the service road be built?	4
Concerned with infiltration/transient traffic	15
Request for closure of Bonnington/Leona	8
Must preserve residential neighbourhood	7
Concerned about property acquisition process	4
Solve access to Highway 401 first, before service road is built	4
Concerned about noise	2
Concerned about air quality	4
Avoid throat widening of Avondale east of Service Road	1
Request looping of roads (internal)	1
Request for more landscape/open space (natural buffer)	3
Close Anndale at east service road	1
Close Glendora at east service road	1
Access - do not close Anndale/Glendora	1
Safety of proposed east service road	2
Request for Avondale "hook-up" with Willowdale Avenue	1
Request for air quality monitoring	1
Road network should not accommodate "vision"	1
Request for greater density	1

Feedback and comments received during and as a result of this meeting were analyzed and addressed by City Staff.

E.10 RECOMMENDATIONS

The transportation infrastructure in support of OPA 393 includes a northbound right turn lane on Yonge Street at Avondale Avenue, Avondale Avenue widened (south side only) to five lanes from Yonge Street to the Midblock alignment and a four lane roadway from Avondale Avenue to Sheppard Avenue along the midblock corridor.

More immediate, but limited, development could occur with only the widening of Avondale Avenue and certain improvements through the intersection of Avondale Avenue with Yonge Street, providing that satisfactory traffic control measures are implemented to address traffic infiltration of the Avondale Community.

It must be continually recognized that the east service road is an important component of the overall road network for the North York Centre Plan and should not be dismissed. It is required to support the traffic demands of significant development in the southeast quadrant of Yonge Street and Sheppard Avenue, and as a result, satisfy the ultimate traffic volumes of the North York Centre.

The Midblock Alternative is recommended as the preferred road alignment for the east service road.

The timing of the construction for part or all of the transportation infrastructure improvements is dependent on private sector development and as such, is unknown.

1.0 INTRODUCTION

1.1 BACKGROUND

The City of North York and Metropolitan Toronto have consistently promoted the development of a Major Metropolitan Centre along the Yonge Street corridor between Highway 401 and Cummer/Drewry.

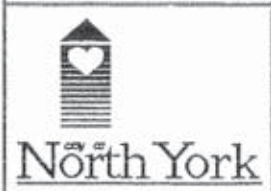
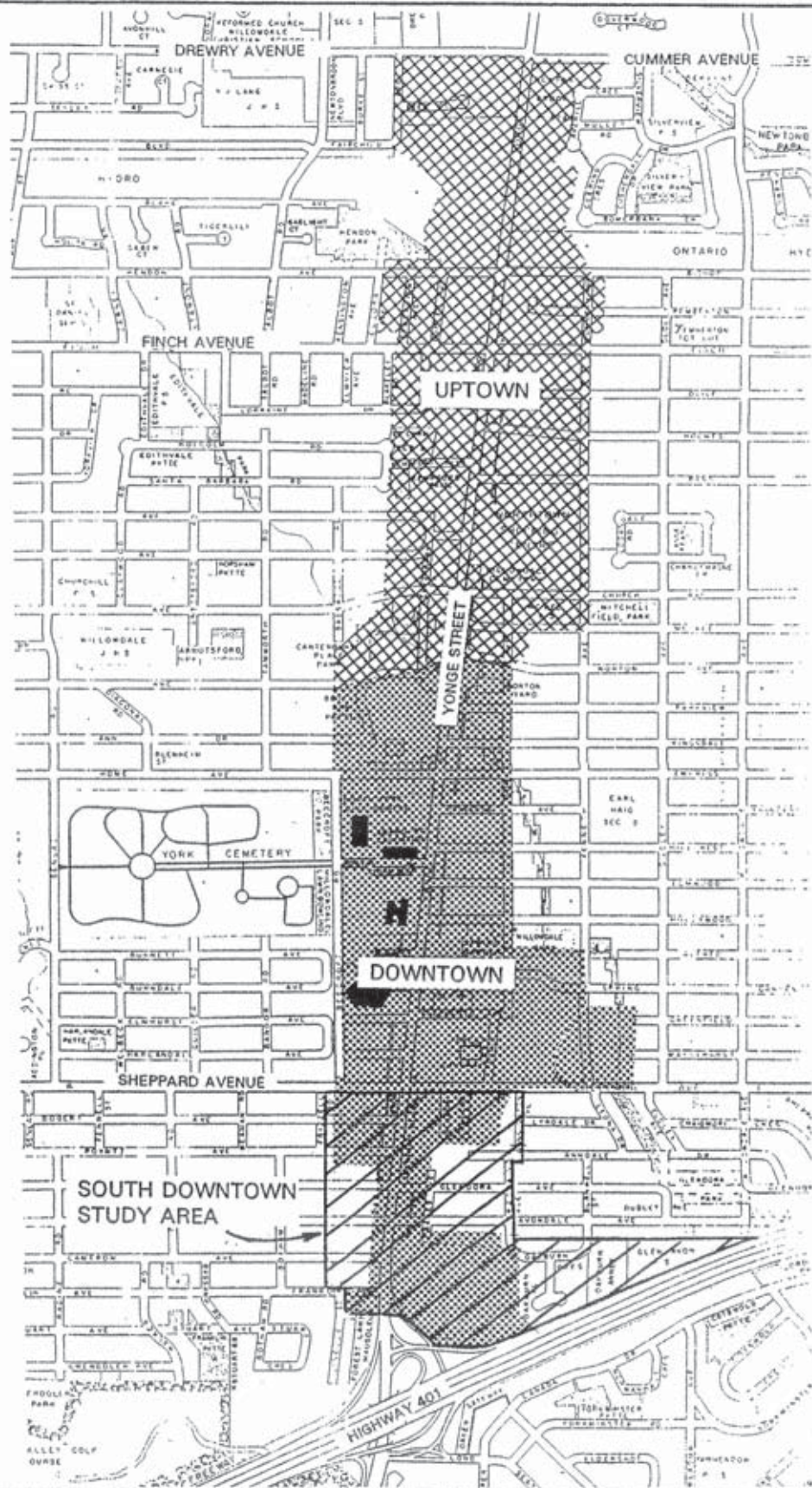
During the early 1970s, North York restructured its Official Plan planning areas to separate the City into five Planning Districts at which time District Plan 11, including the Yonge Street area, was approved. In 1979, Council adopted an amendment to District Plan 11 (Official Plan Amendment D-11-48) which was approved by the Ministry of Municipal Affairs and Housing and the Ontario Municipal Board (OMB) in October 1980. OPA D-11-48 forms the basis to planning in the "North York Centre" and provides a framework for the review of individual development proposals in and around the North York Centre Plan.

In 1983, the City undertook a review of the North York Centre. In 1986, the "Centre" was separated into two distinct planning areas, the "Downtown" and the "Uptown" areas. Subsequently, Council further recognized the area south of Sheppard Avenue referred to as the "South Downtown" planning study area (see Exhibit 1.1).

Final approvals for the Downtown Secondary Plan were granted by the OMB in March 1989, and by the Minister for the Uptown Plan in March of 1994.

The City of North York also undertook separate Schedule 'C' Class Environmental Assessments for the transportation networks in support of the Secondary Plans (Downtown and Uptown). Approval of the Class Environmental Assessments (EAs) were granted in August 1991 and December 1993, respectively.

Council's decision to proceed with a review of the Downtown Area south of Sheppard Avenue occurred in 1992. North York adopted a Master Planning approach to arrive at a land use and a preferred transportation infrastructure plan for the Downtown Area south of Sheppard Avenue. This approach allows the requirements of the Planning Act and the Environmental Assessment Act to be addressed concurrently. With a staff report in October of 1992, Council made a commitment to process a Secondary Plan and a Class EA for the Downtown Area concurrently. This approach was adopted so that land use, density, development staging and undertakings such as roads and transit improvements could be



NORTH YORK CENTRE

NORTH YORK DOWNTOWN
 SOUTH OF SHEPPARD AVENUE
 CLASS ENVIRONMENTAL
 ASSESSMENT STUDY

EXHIBIT
 NUMBER
1.1

reviewed and documented concurrently to avoid duplication encountered in sequential processes. The Master Planning approach also allows the public to understand more fully the implications of land use and transportation decisions and their interrelationship throughout the process.

The process was well advanced in July 1995, when due to the high cost of the infrastructure (including new ramps to Highway 401, east and west service roads and Yonge Street realignment), as revealed through the Environmental Assessment (EA) evaluation, Council directed staff to re-evaluate the long term development objectives for the South Downtown Area and the supporting road requirements. This earlier work of 1995 was summarized in the Status Report, which forms a background to this document (Appendix A). This re-evaluation has resulted in Official Plan Amendment No. 393 (OPA 393), which proposes a more modest level of development as an initial strategy. The transportation infrastructure identified in this report is premised on development levels associated with OPA 393 and within the context of the development levels of the North York Centre. OPA 393 was approved in principle by Council on July 10, 1996.

1.2 PURPOSE OF THE UNDERTAKING

The purpose of this undertaking is to identify the transportation infrastructure that is needed to support the development levels associated with Official Plan Amendment No. 393 of the Downtown Plan south of Sheppard Avenue and within the context of the ultimate development of the North York Centre.

1.3 LIMITATIONS TO THE STUDY

This Environmental Study Report (ESR) follows a defined planning process of the Class Environmental Assessment for Municipal Road Projects to enable construction of a road network in support of proposed OPA 393, which has evolved through the established planning process pursuant to the Planning Act. The study addresses road network improvements needed to accommodate future development in the North York Centre.

The need and justification for this undertaking has been considered in the formulation of policies respecting land use, density, and population levels for the affected area. While the Downtown Official Plan sets the City's policies and planning objectives, the pace of development relies on the private sector. Consequently, while there are certain key features of the undertaking which are

addressed in the ESR, there are other elements such as timing of the project, construction phasing and scheduling and development charges, all of which are directly associated with and relevant to development which must be addressed over time.

This study examines all aspects normally addressed in an ESR undertaken to fulfill the requirements of the Class EA.

1.4 PROJECT STUDY AREA

For the purposes of the Downtown Area south of Sheppard Avenue and this report, the overall study area is depicted in **Exhibit 1.2**. The study area encompasses areas that might potentially be impacted by the roadway infrastructure alternatives.

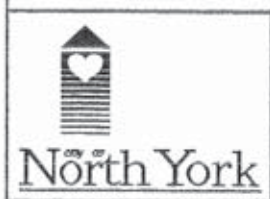
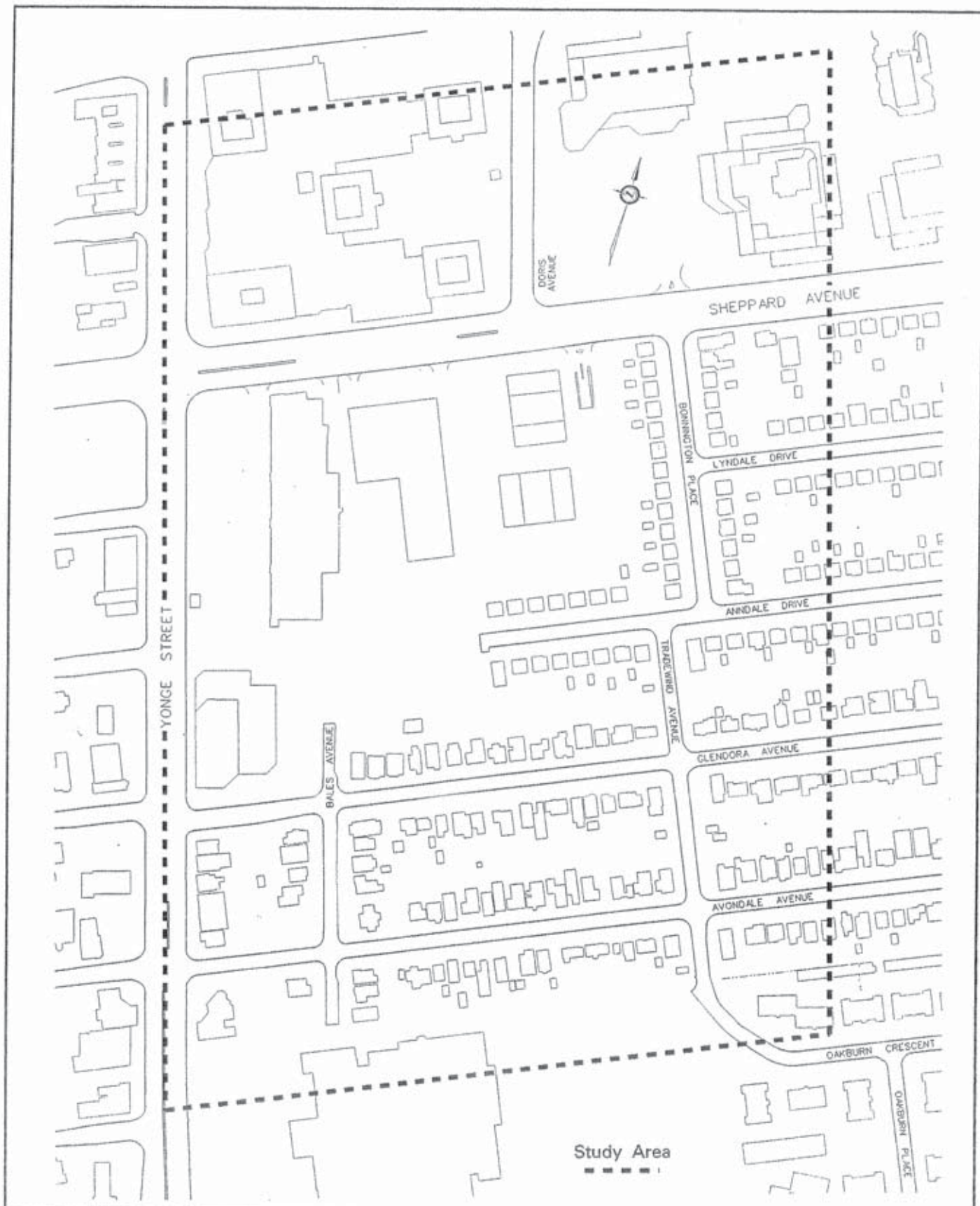
1.5 DEVELOPMENT PRINCIPLES FOR THE DOWNTOWN AREA SOUTH OF SHEPPARD AVENUE

On July 12, 1995, Council adopted a staff report on the South Downtown secondary plan and associated environmental assessment study from the Technical Advisory Committee and the Commissioner of Finance and Treasurer. The staff report identified the high cost of the transportation infrastructure. Council directed that the appropriate officials report back to Council with a re-evaluation of the long-term development objectives for the South Downtown Area and the supporting road requirements.

A report dated January 24, 1996 entitled "Principles of Development for the South Downtown Planning Area" approved by Council establishes the development strategy resulting from the re-evaluation of the South Downtown project. It outlines a suggested staging approach for development, a confirmation of application of the environmental assessment, and recommends a list of development principles.

1.5.1 Development Objectives

The revised strategy for the South Downtown Area will allow development to proceed to a certain level concurrent with improvements to the existing transportation infrastructure. The initial improvements will probably include the widening of Avondale Avenue on the south side only from the Yonge Street intersection to a point east of Bales Avenue at the final alignment of the east service road.



PROJECT STUDY AREA

NORTH YORK DOWNTOWN
 SOUTH OF SHEPPARD AVENUE
 CLASS ENVIRONMENTAL
 ASSESSMENT STUDY

EXHIBIT
 NUMBER
1.2

The development plan would be in keeping with the policies of the Downtown plan. This could bring stability to the existing community, bring more certainty to the alignment for the east service road, while acknowledging the existing fiscal and infrastructure constraints of both the public and private sectors.

The strategy is premised upon staging of development and includes four objectives:

1. to protect through the official plan for a long-term comprehensive development framework for the South Downtown Area,
2. to stabilize existing residential communities,
3. to allow for the commencement of development on lands within the current Downtown planning area, building upon well established principles of the City Centre plan, and
4. to finalize a road alignment for the east service road, and clearly identify and protect for other local, regional and provincial road infrastructure requirements to implement the conceptual long-term development plan.

1.5.2 Transportation Infrastructure Strategy

To address the needs of the immediate future, a modest approach to providing some of the required transportation infrastructure is the only realistic option. In this regard, there is funding support by some of the landowners for the widening of Avondale Avenue to a point east of Bales Avenue, and for the required associated improvements to the Yonge Street and Avondale Avenue intersection.

However, in order to protect for the long-term redevelopment opportunity with a higher density scenario along Yonge Street and the Highway No. 401 corridors, a strategy for the implementation of significant transportation infrastructure is required. A regional transportation plan will be necessary to achieve much of the long-term development scenarios in the Downtown. Its implementation will require the endorsement of all three levels of government, namely the Province, Metropolitan Toronto and the City.

This approach provides an opportunity for the City to complete a long-term development strategy and any subsequent options for review and change. It also protects against piecemeal development on lands which may preclude any comprehensive development. The timing of the implementation of the

transportation plan and the method of funding these improvements are matters to be dealt with in the future. It should be noted that while the City does not commit to the "vision" development, the plan does not preclude a further review in the future.

1.5.3 South Downtown Eastern Boundary

The east service road and its associated buffer area identified from the master planning process will provide a hard-edge boundary between redevelopment to the west and the existing stable residential communities to the east. This will ultimately become the eastern boundary of the Downtown plan from Sheppard Avenue East to Avondale Avenue.

The east service road is an important component of the road network for the North York Centre Plan, and is required to support and satisfy the ultimate traffic volumes of the "Centre", or when the traffic demands of significant development in the southeast quadrant of Yonge Street and Sheppard Avenue necessitates the construction of the road.

1.5.4 Staging of Development

It is proposed that the initial development area include:

1. certain lands within the current Downtown boundary east of Yonge Street;
2. lands south of Avondale Avenue;
3. lands within the RD3 land use designation east of Tradewind Avenue and south of Avondale Avenue adjacent to Oakburn Crescent and Oakburn Place known as the Anndale land assembly.

Due to the present economic climate and the lack of financial commitment from the private sector and other levels of government, there is no guarantee at this time that additional components of the transportation improvements will ensue. The City must be prudent and not commit itself to development that relies on infrastructure which may never be built. Therefore, commitment to additional development beyond the initial stage of development is inappropriate at this time.

Any future transportation improvements will be triggered by private sector initiatives. These improvements will be assessed through traffic impact analyses and will be reviewed by the City in the context of the Downtown plan. Site specific

development must also satisfy the "Community Impact Criteria" to ensure that development related traffic will not rely on the local road network of the stable residential area.

1.6 RELATED STUDIES

The infrastructure required in support of the overall "vision" (previous work on a Secondary Plan as discussed in Section 1.1) is not the subject of this report. Analysis of those requirements was carried out in 1994/95 and was, in part, the basis for Council's decision to scale back development in July, 1995. The analysis is documented in a Status Report submitted to North York Transportation Department and is available as a background document, under Appendix A.

1.7 CLASS EA PROCESS AND RATIONALE

The undertaking has proceeded as a Schedule 'C' project under the Class Environmental Assessment for Municipal Road Projects. The rationale for proceeding in this manner is described below.

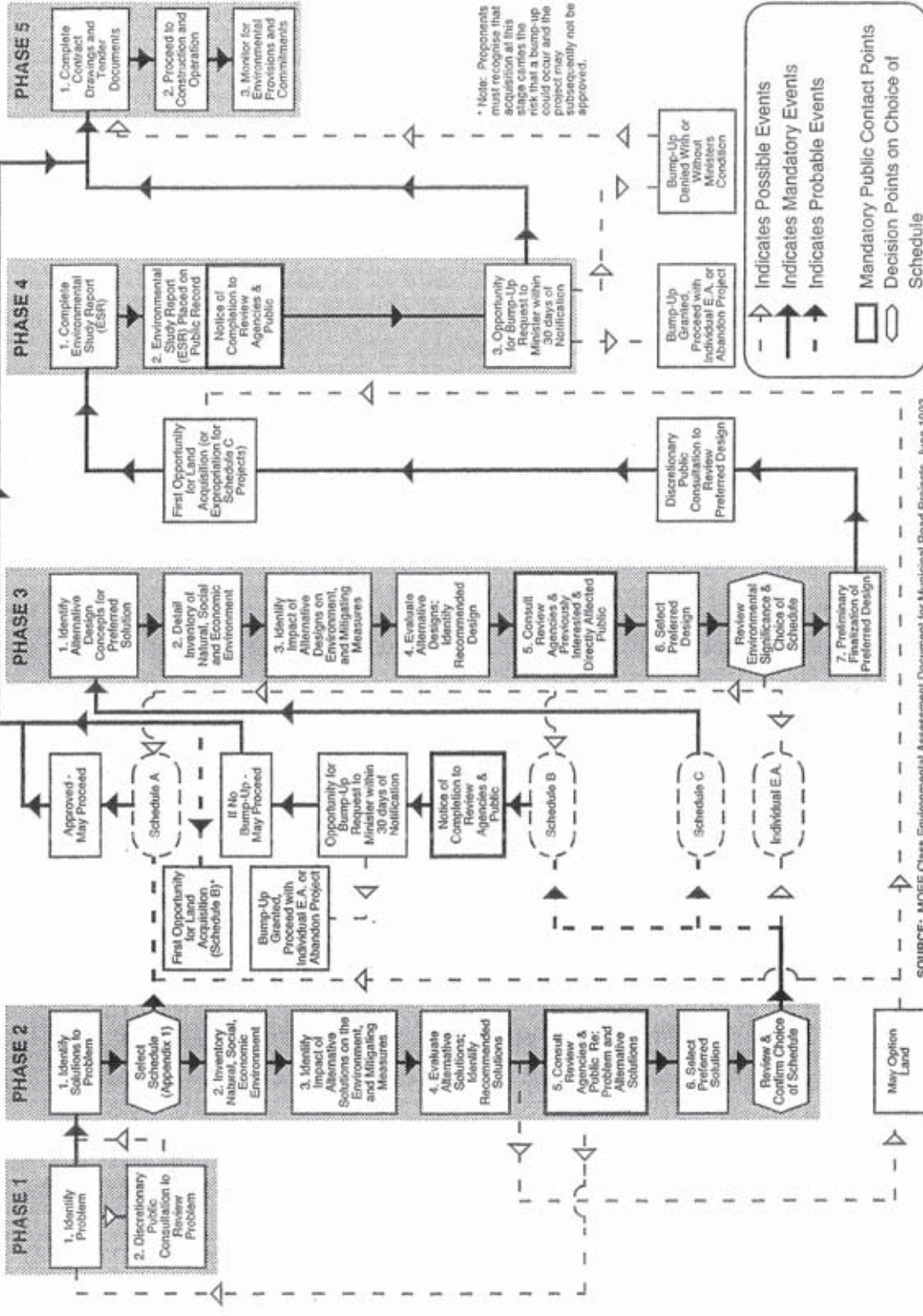
This project proposes to construct a new road through an urban area where the impacts are predictable, measurable and mitigatable in nature. The total cost of implementing this undertaking is greater than \$1.5 million and therefore, a Schedule 'C' Class EA is required.

While this project does produce impacts, those impacts can be mitigated and as stated in the document Class Environmental Assessment for Municipal Road Projects, "Schedule C projects have the potential for significant environmental effects and must proceed under the full planning and documentation procedures specified in this Class EA document". This is the intent of this document.

The process followed in the planning and design of this Class EA is illustrated in **Exhibit 1.3**. The chart incorporates steps considered essential for compliance with the requirements of the Act which may be summarized as follows:

- Phase 1 Identifies the problem or deficiency the undertaking must address;
- Phase 2 Identifies alternative solutions to the problem. Factors to be taken into consideration before selecting a preferred solution include the existing environment, and public/agency review and input;
- Phase 3 Examines alternative designs of implementing the preferred solution. Factors taken into consideration include: the existing environment,

Planning and Design Process for Municipal Road Projects



NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

CLASS ENVIRONMENTAL ASSESSMENT PROCESS

EXHIBIT NUMBER 1.3

public and government agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects;

Phase 4 Documentation in an Environmental Study Report (ESR), that includes: a summary of the rationale, and the planning, design and consultation process of the project as established through the above Phases 1 - 3;

Phase 5 Completion of contract drawings and documents. The undertaking then proceeds to construction and operation; during this time construction monitoring for adherence to environmental provision's also carried out.

The planning and design process has been undertaken in such a way as to allow a reviewer to trace easily each step of the process.

1.8 ENVIRONMENTAL STUDY REPORT

The purpose of this Environmental Study Report (ESR) is to study and recommend the transportation infrastructure requirements necessary to support the development levels for the Downtown Plan south of Sheppard Avenue associated with OPA 393 and within the context of the North York Centre Plan.

Individuals that are interested in the final outcome of the Master Planning process should review OPA 393 and all relevant background documentation in conjunction with this report.

The documentation of the planning and design process followed in developing a Schedule "C" project is a mandatory requirement of the Class EA process. Schedule "C" projects, therefore, carry the requirement for the preparation of a formal Environmental Study Report (ESR).

When completed, the City of North York is required to place the ESR with the City Clerk for inspection by the public, government agencies, and private agencies for a period of 30 calendar days. Any person/party objecting to the contents or the conclusions of the ESR is required to bring those concerns to the attention of the City. Should the issues be of such a nature that they cannot be resolved to mutual satisfaction, then the person/party may, in that 30 day period, request the Minister of the Environment and Energy to "bump-up" the project to an individual environmental assessment. The Minister shall consider both sides of the argument and make a decision. If there are no objections to the ESR, the project will proceed.

1.9 STUDY TEAM

The ESR for the Downtown Area south of Sheppard Avenue was prepared by Cole, Sherman & Associates Ltd., on behalf of the proponent, the City of North York. The study team consists of the consultant plus staff from North York Transportation and Planning Departments. Cole, Sherman has expertise in the fields of transportation and roadway engineering and environmental planning/consultation. This group has led the EA process for the Downtown Area south of Sheppard Avenue area by conducting detailed analysis and the second Public Information Centre.

In the areas of noise and air quality assessment, the Cole, Sherman Team retained the services of the following sub consultants:

- S.S. Wilson & Associates (Noise Assessment);
- R.W.D.I. (Air Quality Assessment).

Where appropriate the Study Team received input from the following:

- The City of North York Public Works Department;
- Recreation Department;
- Legal Department;
- Finance and Property Departments.

- Metropolitan Toronto Planning Department;
- Transportation Department.

- Ontario Ministry of Transportation

2.0 PUBLIC PARTICIPATION

2.1 INTRODUCTION

Throughout the Master Planning process, North York has undertaken considerable efforts to obtain public input. Since early 1992, North York staff and Technical Committees, formed specifically for the review, have met with various land owner groups and public agencies to elicit feedback as the review progressed. This process involved the initial Public Information Centre required under the Class EA open houses, workshops, and meetings with various technical committees. As well, there were reports to the Planning Advisory Committee and Council which are public documents, and a number of issues of the planning department newsletter(s) that were mailed to all stakeholders. Beginning in January of 1995, ten (10) additional stakeholder meetings were held to obtain valuable input.

The overall objective of the consultation process was to involve as many stakeholders as possible in an interactive process of goal setting. This included involvement in the planning process, as well as the Class EA. Combined, this input formed feedback for the Master Planning process. Other involvement included the Community Consultation Committees which were made up of local area representatives and provided a critical link between area residents/ landowners and the project team guiding the Master Planning process. Focus groups or workshops were also held and attended by City staff and Cole, Sherman. These workshops gave more detailed information on specific issues from the general surveys that were distributed at the first workshops. Public input was considered to be essential to establishing the policies of the Downtown Area south of Sheppard Avenue.

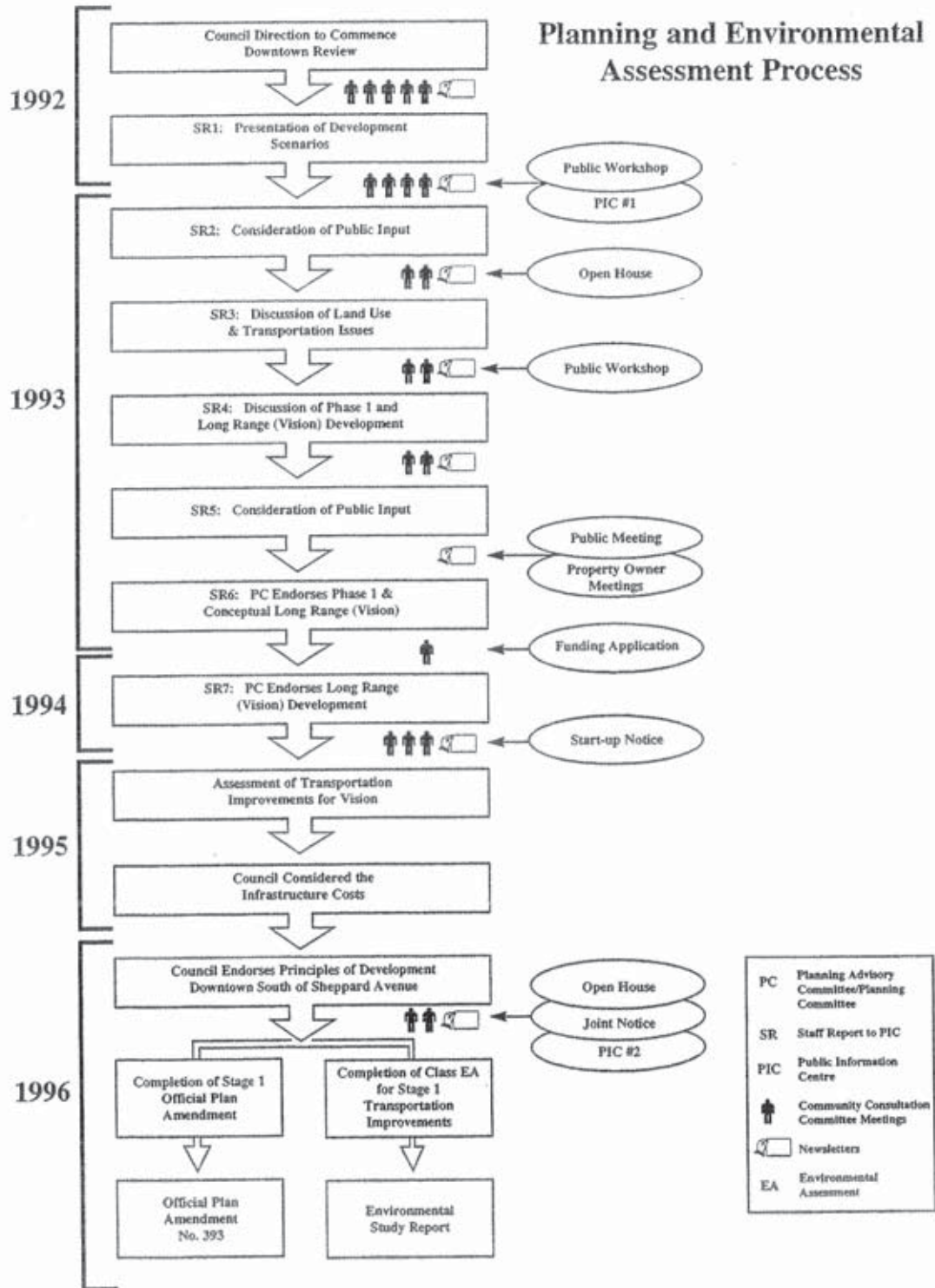
The public consultation as described above is part of this project. The first public information centre was held on February 18, 1993. The overall consultation process followed since 1992 can be seen in **Exhibit 2.1**.

2.2 STAKEHOLDERS

The following is a general listing of those interested in or impacted by the Downtown Area south of Sheppard Avenue.

- City of North York
- Metropolitan Toronto
- Toronto Transit Commission
- Province of Ontario-MTO, MMAH, MOEE
- Boards of Education-MSSB, PSB

Planning and Environmental Assessment Process



STUDY PROCESS

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER

2.1

- Residents of Wards 8, 9, 11, Central Willowdale Ratepayers Association, Lansing Community Association, Yonge Ridge Homeowners Association, Avondale Ratepayers Association, South Downtown Property Owners Group.
- Developers
- Land Owners
- Workers in the area using the transportation network
- Utilities-Bell, Hydro, Cable etc.

2.3 OVERALL CONSULTATION PROCESS

The overall consultation process consisted of public meetings, workshops, open houses, newsletters, Community Consultation Committee(s) and regular staff reports. There has been an ongoing process of public consultation since 1992, as outlined in the *Environmental Assessment Study, Status Report (October 1995)*. This consultation has helped focus on individual issues as related to this study.

2.4 PUBLIC PARTICIPATION

This section outlines the public consultation associated directly with the Environmental Assessment Study for road infrastructure improvements and OPA 393.

2.4.1 Start-Up Notice

In November of 1994, Council directed staff to proceed with the specifics of the EA, engineering and feasibility of the infrastructure and authorized the hiring of engineering consultants (Cole, Sherman and Associates).

In early January of 1995, a "Start-up Notice" introducing the consultants (and stating the status of the project) was mailed to the stakeholders (including ratepayer groups, various agencies and ministries, and specific members of the public) within the study area and the external team members. There was also an advertisement placed in the Toronto Star on January 12, 1995, the Corriere Canadese on January 13 and 14, 1995, and the North York Mirror on January 14, 1995. The purpose of this notification was to inform interested parties of the Environmental Assessment Study for the infrastructure to support the South Downtown Secondary Plan (the "vision").

2.4.2 Joint Notice

A joint notice was mailed to advise the affected public stakeholders and other interested parties of the Planning Committee Public Meeting for the South Downtown Planning Area (OPA 393) and for the PIC for the transportation infrastructure to support OPA 393. This notice was sent in March of 1996. Notification also included publication of two advertisements in the Toronto Star on March 7 and March 14, 1996, as well as publication in Corriere Canadese on March 11, 1996, and the North York Mirror on March 18, 1996.

2.4.3 Public Information Centre #2

Public Information Centre (PIC) #2 was held on April 23, 1996, between 5:00 p.m. and 9:00 p.m., at the North York City Hall. The purpose of this PIC was to present the following:

- i) Study Process;
- ii) Problem/Opportunity Statement;
- iii) Alternative Solutions to the Problem;
- iv) Alternative Designs;
- v) Analysis and Evaluation; and,
- vi) Recommendation of the Preferred Alternative.

153 persons attended this meeting, and 44 comment sheets were received at that time. Within two weeks of the PIC, a further 32 responses were received. In total, 53 comment sheets and 23 letters were received by the study team. A summary of the responses is as follows:

Comment Sheets In Favour of:	Midblock	15
	Tradewind	14
	Bales	21
	Route Closest to Yonge Street	7
	Avondale/Willowdale connection	1
	Poyntz	1

Other Comments

Should build service road concurrently with Avondale	16
Against the widening of Avondale Avenue	5
When will the service road be built?	4
Concerned with infiltration/transient traffic	15

Request for closure of Bonnington/Leona	8
Must preserve residential neighbourhood	7
Concerned about property acquisition process	4
Solve access to Highway 401 first, before service road is built	4
Concerned about noise	2
Concerned about air quality	4
Avoid throat widening of Avondale east of Service Road	1
Request looping of roads (internal)	1
Request for more landscape/open space (natural buffer)	3
Close Anndale at east service road	1
Close Glendora at east service road	1
Access - do not close Anndale/Glendora	1
Safety of proposed east service road	2
Request for Avondale "hook-up" with Willowdale Avenue	1
Request for air quality monitoring	1
Road network should not accommodate "vision"	1
Request for greater density	1

Feedback and comments received during and as a result of this meetings were analyzed and addressed by City Staff.

Issues and concerns relating to alternative methods and alternative designs are discussed in chapters 4 and 5 of this study.

2.5 SPECIFIC RESPONSE

The general intent of the Public Information Centre is to inform and elicit comments from the public and therefore, the reaction of the public is important. As can be seen, a number of individuals have taken the time to become involved and respond to the information presented. In no way distinguishing the importance of specific comments, there are some comments which were commonly received and/or heard which require attention.

The Avondale Ratepayers Association along with the Ward 11 South Downtown Community Consultation Committee have taken a strong position with respect to a number of issues, the majority of these have been addressed within the body of this document or can be found in the applicable appendix. However, one of the principle concerns which did not form part of the environmental assessment study was the extent of current traffic infiltration of the residential community to the east,

3.0 EXISTING AND FUTURE CONDITIONS

3.1 EXISTING ENVIRONMENT

3.1.1 Natural

Little remains of the natural environment indigenous to the study area. Given the urban character of this area, no significant wildlife habitat or vegetation is found within the study area with the exception of roadside and residential mature trees (predominantly Silver Maple) and shrubs.

3.1.2 Existing Land Use

The Downtown Area south of Sheppard Avenue is characterized by a mix of low density residential housing, large commercial developments, institutional uses and strip retail businesses associated with Yonge Street activity. While primarily residential in nature, it is a vibrant and changing neighbourhood, full of viable enterprises that attract workers, users and residents to the area. However, upon examination, there is evidence of instability in the Downtown, specifically associated with Yonge Street.

There appears to be a number of absentee landlords who own residential property in the vicinity of the Downtown Area South of Sheppard Avenue. This could suggest that certain owners are speculating on the possibility of seeing a change in development capabilities in the next few years.

Along Yonge Street there exists a number of large developments that provide a commercial element to the South Downtown. These include: the Proctor and Gamble site (.73 ha, 1.8 ac), the North York Square site (1.21 ha, 3.0 ac) and the National Grocers/Westnor site (9.47 ha, 23.4 ac). These developments and other commercial businesses along Yonge Street south of Sheppard Avenue provide employment for the Downtown and the City of North York.

Yonge Street, south of Sheppard Avenue also hosts a variety of lower density mixed use developments such as the Willowdale Plaza (Save-a-Centre Food Store and National Sports), a funeral home, a mausoleum, several gas stations, fast food and "sit-in" restaurants and a number of other convenience, commercial and retail businesses.

3.1.3 Heritage Features

The City of North York, in concert with the North York Historical Board have developed an inventory of historically and architecturally significant sites and buildings that contribute to the cultural environment of the Downtown Area. There is one (1) such site within the study area which is fully designated as a heritage site. To be designated, a site must have undergone a public process which includes public input and the passing of a site specific by-law which ultimately is registered on title. Once designated, the property cannot be demolished or altered in any way that would jeopardize the heritage values recognized in the underlying reasons for the designation without undergoing an approval process. A designation does not prohibit demolition, however it makes the process extremely cumbersome.

The designated property within the study area is the Elihu Pease House (1834) at 34 Avondale Avenue (designation by-law #31251). The Pease House is a rare survivor of the rural Village of Lansing and has connections with important early North York settlers, the Pease and Cummer families. It preserves the scale and ambiance of an Upper Canada home and a vanished way of life. The house has been moved from its original location, however remains on the original farm lot. The Pease family built the tannery business at Yonge Street and Sheppard Avenue in 1834.

3.1.4 Transportation

The existing transportation infrastructure consists of a combination of roadway, highway, subway, bus and pedestrian facilities.

The arterial roads within the study area include Yonge Street (six lanes) and Sheppard Avenue (four basic lanes being widened to six). To the east and west of Yonge Street there exist numerous collector and local roads that serve residential neighbourhoods.

Highway 401, a major core/collector freeway, runs east-west south of the study area. Yonge Street and Highway 401 meet at a full interchange configured in a modified partial cloverleaf design.

The Yonge Street TTC subway line runs under the Yonge right-of-way and serves the area through the Sheppard Subway Station. The Sheppard Subway line is

currently under construction and is assumed to be in operation for the future conditions. It will also serve the area through the Sheppard Subway Station.

There is skeleton bus service on Yonge Street, including all-night service from downtown Toronto. On Sheppard Avenue, there is very high frequency all-day bus service, that will be replaced, at least in part, by the proposed Sheppard Subway Line.

Due to the existing transit modal split and the high density in this area, pedestrian activity in the Downtown is relatively significant and is assumed to increase in the future. All arterial and collector roads in the area have concrete sidewalks on both sides of the street. Pedestrian access is maintained through the east portion of the Yonge Street and Highway 401 interchange by use of the tunnel for the ramp W-N.

3.2 PROPOSED DEVELOPMENT

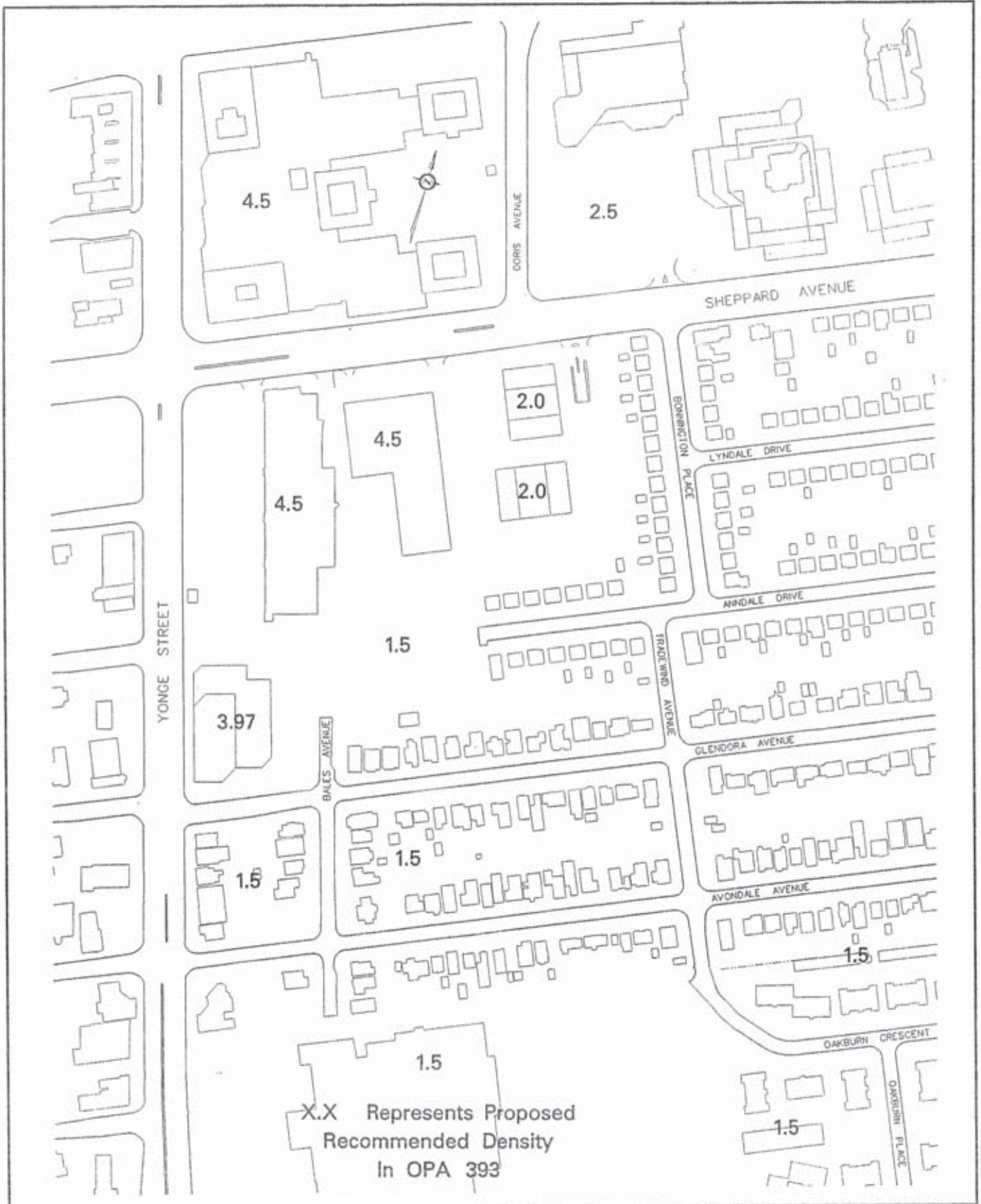
3.2.1 Official Plan Amendment 393

OPA 393 is the planning document that forms the basis for the transportation infrastructure proposed in this report. The east service road and the widening of Avondale Avenue are in support of the development levels associated with OPA 393 within the context of the North York Centre. A public meeting of Planning Committee regarding OPA 393 was held on April 24, 1996, reconvened on June 5, 1996 and then adjourned until July 3, 1996 at which time the Committee recommended that OPA 393 be approved in principle without identifying the east service road. At its meeting of July 10, 1996 Council subsequently adopted the Planning Committee's recommendation. The densities proposed by OPA 393 can be seen in **Exhibit 3.1**.

3.2.2 Specific Development Applications

There are a number of development applications in the Downtown area south of Sheppard Avenue that warrant discussion.

- 1) Westnor Limited owns a major site within the northeast quadrant of Yonge Street and Highway 401 which consists of approximately 9.47 hectares (23.4 acres). An application for rezoning, Official Plan amendment and plan of subdivision was made by the owners on January 16, 1992. While circulation of these applications commenced in January, 1992, the City's position has been to defer specific consideration pending the outcome of OPA 393. Westnor has subsequently had its applications referred to the Ontario Municipal Board for consideration.



PROPOSED RECOMMENDED
DENSITIES IN OPA 393

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER

3.1

In order to accommodate the proposed density of for this site, certain infrastructure improvements are required.

Over the long term, the applicant is proposing to develop the site for a mixed use project that will include office, residential, retail, commercial and possibly a hotel. Proposed OPA 393 accommodates Phase 1 of the longer term development plan for this site. Proposed OPA 393 maintains a Floor Space Index of 1.5 for this site.

- 2) The Seneca College facility located on the south side of Sheppard Avenue immediately east of Yonge Street is comprised of 0.98 hectares (2.47 acres). This property is being considered for lease by the Toronto Transit Commission for use as a storage compound during the construction of the Sheppard Avenue subway line. There are no active applications for redevelopment at this time. The Downtown Plan currently allows a maximum density of 4.5 Floor Space Index on this site. OPA 393 does not change this density.
- 3) Anndale Investments Limited and Crestview Investment Corporation own the lands known as the Oakburn Apartment Site situated to the south of Avondale Avenue, and east of the Westnor site. The site is approximately 3.9 hectares (9.65 acres) in area, housing 26 low-rise residential buildings containing 338 rental housing units. A proposal has been developed by the owners for a two phase 1,500 residential unit condominium and rental development. A request to refer the official plan amendment application has been referred to the Ontario Municipal Board and is under consideration by the Minister of Municipal Affairs and Housing. An application to amend the zoning, a plan of subdivision, and an application under the Rental Housing Protection Act will be submitted after the official plan amendment has been finalized. OPA 393, proposes a 1.5 Floor Space Index for this site.

4.0 PROBLEM STATEMENT AND ALTERNATIVE SOLUTIONS

4.1 PROBLEMS AND OPPORTUNITIES

The Class Environmental Assessment for Municipal Road Projects asks proponents to identify and describe the problems and/or opportunities which the project (undertaking) is expected to resolve. The transportation network deficiency may or may not be obvious to the public, nevertheless it is necessary to document the rationale which led to the conclusion that improvements are needed.

The original Downtown plan identified the need for a service road in the southeast quadrant of Sheppard Avenue and Yonge Street to be completed as part of the overall plan. The development applications of Westnor and Anndale/Crestview have provided a major impetus for a review of the Downtown Plan south of Sheppard Avenue and hence for specific consideration of the east service road.

OPA 393 envisions higher density development along the major road frontages of Highway 401, Yonge Street and Sheppard Avenue. Traffic on all these roads is significant, particularly during peak hours. Although implementation of the Sheppard Subway will improve transit use to the area and assist the target modal split of 60 percent transit to be achieved, more vehicular traffic will occur as development continues in the North York Centre.

As stated in Section 1.2, the purpose of this undertaking is to identify the transportation infrastructure that is needed to support the development levels associated with Official Plan Amendment No. 393 of the Downtown Plan south of Sheppard Avenue and within the context of the ultimate development of the North York Centre.

The road network should:

- i) Complete the link with respect to the Downtown service road within the southeast quadrant of Yonge/Sheppard in the North York Centre. This link will consist of the widening of Avondale Avenue and the introduction of a new east service road;
- ii) Improve traffic circulation and provide capacity in support of recommended development;
- iii) Facilitate the flow of traffic to and from existing and future development in the Downtown Area south of Sheppard Avenue, allowing arterial roads to carry through traffic;

- iv) Alleviate heavy turning movements at Yonge/Sheppard, Doris/Sheppard and Avondale/Yonge;
- v) Create road frontage for internal development blocks in the Downtown Area south of Sheppard Avenue;
- vi) Provide improved access to existing and future development;
- vii) Help protect stable residential area from traffic infiltration;
- viii) Help provide certainty in terms of how the development plans will be accommodated by delineating a boundary;
- ix) Not preclude possible roads and future development consistent with improved access to Highway 401; and,
- x) Protect for longer term transportation capacity requirements.

The above objectives form the need and justification for this undertaking.

4.2 ALTERNATIVE SOLUTIONS TO THE PROBLEM

Development of the North York Centre which includes that area south of Sheppard Avenue is consistent with the Metropolitan Toronto Official Plan to create a metropolitan centre along Yonge Street from Highway 401 to Cummer/Drewry. The principles for development of the Downtown Area south of Sheppard Avenue, as set out by the City in January 1996, supplement the overall development policies of the City.

Together, these policies and principles establish the need to consider alternative transportation solutions. These solutions are intended to support the future development by responding to the problems and opportunities as previously identified.

The following alternative solutions have been considered:

- Do Nothing - This alternative would result in severe and unacceptable congestion on Yonge Street and the connecting arterial roads, leading to extensive traffic infiltration into the adjacent neighbourhoods;
- Transit Improvements - A transit modal split of 60% has been assumed for the North York Centre which corresponds with other development nodes (e.g. Yonge/Bloor, Eglinton/Yonge, etc.). It is unlikely that the assumed transit modal split could be exceeded; and,

- Roadway Improvements - Four road alternatives for the east service road were considered: Bales, Poyntz, Midblock and Tradewind. Only the Midblock and the Tradewind alternatives adequately address the problems and opportunities previously identified.

4.2.1 Do Nothing

The 'do nothing' alternative represents what is expected to happen if none of the alternatives being considered are carried out. Normal on-going roadway maintenance or improvements (including the Sheppard Avenue widening) and a 60% transit modal split to reflect the Sheppard Subway, are included as part of the 'do nothing' alternative.

The Uptown and Downtown planning areas together form the North York Centre. A transportation analysis conducted by Metropolitan Toronto in 1985 for the North York Centre concluded that a "ring" road system would be needed to provide access to development parcels and to facilitate circulation of traffic, particularly shorter distance trips destined within the Centre. If the ring road (service road) was not implemented, congestion on Yonge Street and the connecting arterial roads would promote inappropriate and extensive infiltration of traffic into the adjacent residential neighbourhoods.

Impacts on Downtown vehicle access and circulation caused by the 'do nothing' alternative would be unacceptable to the transportation authorities (i.e., North York and Metropolitan Toronto) involved in this study because of severe traffic congestion and higher safety risks could occur at ultimate development. More specifically the objectives as outlined in Section 4.1 could not be achieved.

For the above reasons, the "do nothing" alternative was dismissed from further consideration.

4.2.2 Transit Improvements

As previously noted, the City of North York and the Toronto Transit Commission (TTC) have analyzed the potential improvements of the transit system in the Downtown Area. Aside from the Sheppard Subway (which is already under construction), the most significant improvement to transit, which has been considered only from a conceptual point of view, would be the addition of a subway station south of Sheppard Avenue at Avondale Avenue. Since the

entrances to the Sheppard station on the Yonge Line are at Poyntz Avenue, it is unlikely that a new subway station at Avondale Avenue would improve the transit modal split beyond the assumed 60%. Furthermore, a review of transit modal split information (1986-91 Transportation Tomorrow Survey) for areas with development and transportation characteristics similar to those proposed for the South Downtown (e.g., Bloor/Yonge, St. Clair/Yonge, Eglinton/Yonge), has indicated that it is unlikely that the assumed 60% modal split could be exceeded. Consequently, further improvements to transit (beyond that which is currently planned) were eliminated as an alternative solution to the problem.

4.2.3 Roadway Improvements

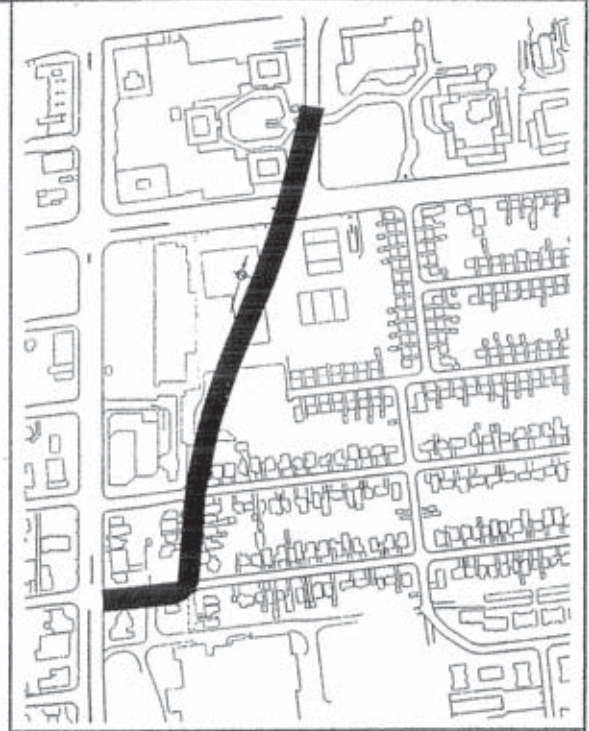
After screening each alternative, it has been concluded that roadway improvements are needed to address the problems and opportunities previously identified. Improving the road network will allow vehicular traffic to move through intersections and along roadways efficiently. In keeping with the previous studies and the analysis of future baseline traffic conditions, the study team concluded that the improved road network would have to incorporate the extension of the east service road south of Sheppard Avenue and the widening of Avondale Avenue from Yonge Street to the east service road.

The following four roadway alternatives were considered for the east service road (see Exhibit 4.1).

Poyntz Alternative: A new road from Doris/Sheppard to Poyntz/Yonge combined with a widening of Avondale Avenue does not fully support potential for development as recommended in Official Plan Amendment No. 393 and is not consistent with possible future connections to Highway 401 as outlined in the "vision". This alternative would be the most expensive with limited benefit. Therefore, it was not considered further.



Poyntz Alignment – Dismissed



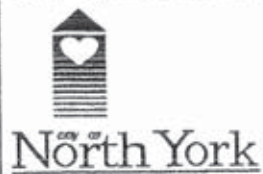
Bales Alignment – Dismissed



Midblock Alignment
Carry Forward for Evaluation



Tradewind Alignment
Carry Forward for Evaluation



ALTERNATIVE ROAD
ALIGNMENTS

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY

EXHIBIT
NUMBER

4.1

Bales Alternative: A new road from Doris/Sheppard to Avondale/Yonge via Bales Avenue is not technically sound because:

- a) an unsignalized intersection design (at Bales/Avondale) would not be appropriate due to operational and safety concerns (i.e. possible southbound double rights, double left turns, restricted movements and/or unacceptable level of service to/from the east);
- b) a signalized intersection design (at Bales/Avondale) can not be provided due to substandard intersection spacing between Yonge and Bales resulting in potential operation and safety problems.

In addition, the alignment is not consistent with possible future connections to Highway 401, and therefore, does not protect for long-term development potential. This alternative was not considered further.

Midblock Alternative: A new road from the Doris/Sheppard intersection to the Avondale/Yonge intersection via a midblock alignment between Tradewind Avenue and Yonge Street has the ability to address the identified problems and opportunities and was carried forward for evaluation.

Tradewind Alternative: A new road from the Doris/Sheppard intersection to the Avondale/Yonge intersection via the Tradewind corridor has the ability to address the identified problems and opportunities and was carried forward for evaluation.

4.2.5 Conclusions

In summary, throughout the development of OPA 393 and identification of the problem/opportunity statement for this undertaking, it has been demonstrated that the alternative of improving the road network is the one that best satisfies the City's needs. The road network to be developed and evaluated will include a widened Avondale Avenue from Yonge Street to an east service road which would be the extension of the service road south from Doris Avenue along either the Midblock route or the Tradewind Avenue route. Chapter 5 of this study will outline the generation of alternative road network improvements to be used in the evaluation process.

4.3 ISSUES AND CONCERNS

There were many comments from members of the public indicating that the Bales Avenue alignment be further considered. The Bales Avenue alignment was dismissed as the assigned volume of traffic on the service road could not accommodate safe and efficient traffic operations between Yonge Street and Bales Avenue.

Of particular concern was the queuing of traffic on the east leg of the Avondale Avenue and Yonge Street intersection, which was estimated to back up to its intersection with Bales Avenue or beyond. The high levels of southbound right turn movements from the service road to Avondale Avenue and destined to southbound Yonge Street and the ramps to Highway 401, would therefore not be able to weave from the north to the south side of Avondale Avenue, in the relatively short distance between Bales Avenue and Yonge Street.

The traffic conflicts which would occur within that short distance, create a safety issue which cannot be endorsed by the North York or Metropolitan Toronto Transportation Departments.

In addition, it is important to note that one of the purposes of the widening of Avondale Avenue and the service road, is to provide access to development. It was determined through the process that the development contemplated in the Westnor site, would ultimately require signalized access onto Avondale Avenue.

The minimum spacing for efficient coordination and progression of traffic control signals, is 220 metres from the centre of one intersection to the centre of another. The distance between Bales Avenue and Yonge Street along Avondale Avenue is 105 metres, well below the above noted signal separation requirement.

For comparison purposes, the distance of the intersection of the Midblock and Avondale Avenue from the intersection of Avondale Avenue and Yonge Street is approximately 215 metres. The distance of the intersection of Doris Avenue and Sheppard Avenue from the intersection of Sheppard Avenue and Yonge Street is approximately 225 metres.

5.0 ALTERNATIVE DESIGNS

5.1 INTRODUCTION

As concluded in the previous section, roadway infrastructure improvements are required to solve the problem. These will include the addition of a northbound right turn lane on Yonge Street at Avondale Avenue, the widening of Avondale Avenue to five lanes from Yonge Street to the east service road and the extension of the east service road south from Doris Avenue to Avondale Avenue.

5.2 ROAD NETWORK DESIGN OBJECTIVES

Roadway networks to include east service road and Avondale Avenue were developed to meet the future development objectives of proposed OPA 393 in the context of the North York Centre as a whole. The objectives of this network are outlined below:

East Service Road (north-south continuation of the existing Service Road in the Downtown, east of Yonge Street)

- Connect with Doris Avenue at Sheppard Avenue;
- Allow for future connections to east-west link and Highway 401 ramps at the south end;
- Alignment far enough east of Yonge Street to provide for a signal at Avondale Avenue;
- Capacity sufficient to service the proposed development; and,
- Capacity sufficient to allow the road to function as an integral component of the service road for the entire North York Centre.

Capacity analysis of future traffic projections has shown the need for four lanes on the east service road with five lanes at the Doris Avenue and Sheppard Avenue intersection. On Avondale Avenue, four lanes are required for through movement capacity, with five lanes at Yonge Street and five lanes at the intersection with the east service road. The distance which the five lane cross-section extends between intersections is such that good engineering design requires a continuous five lane cross-section for the entire length of the widening on Avondale Avenue (from Yonge Street to the east service road). The details of this capacity analysis can be seen in the traffic report, Appendix B.

5.3 THE ALTERNATIVES

Using the rationale discussed above, alternative designs were generated. Four alternatives within the Midblock corridor and five within the Tradewind corridor were developed to a schematic level of detail. An alternative representing the best of the Tradewind set and an alternative representing the best of Midblock set were developed to a preliminary design level of detail for analysis and evaluation. The Midblock Alternative and the Tradewind Alternative can be seen in Exhibits 5.1 and 5.2 respectively.

5.4 EVALUATION CRITERIA AND ANALYSIS OF ALTERNATIVES

The criteria used to evaluate the alternatives were developed by the study team utilizing evaluation factors in part developed from the comments received from stakeholders meetings of January, 1995, and other relevant Environmental Assessment factors. These factors considered the traffic operations, natural environment, socio-economic environment, cultural environment and the cost of each alternative. The factors were broken down into three groups: i) ability to meet the identified problems/opportunities, ii) impacts to socio-economic environment and iii) indirect impacts.

Ability to Meet the Identified Problems/Opportunities:

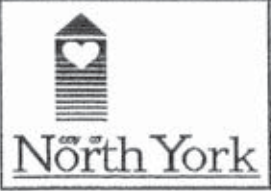
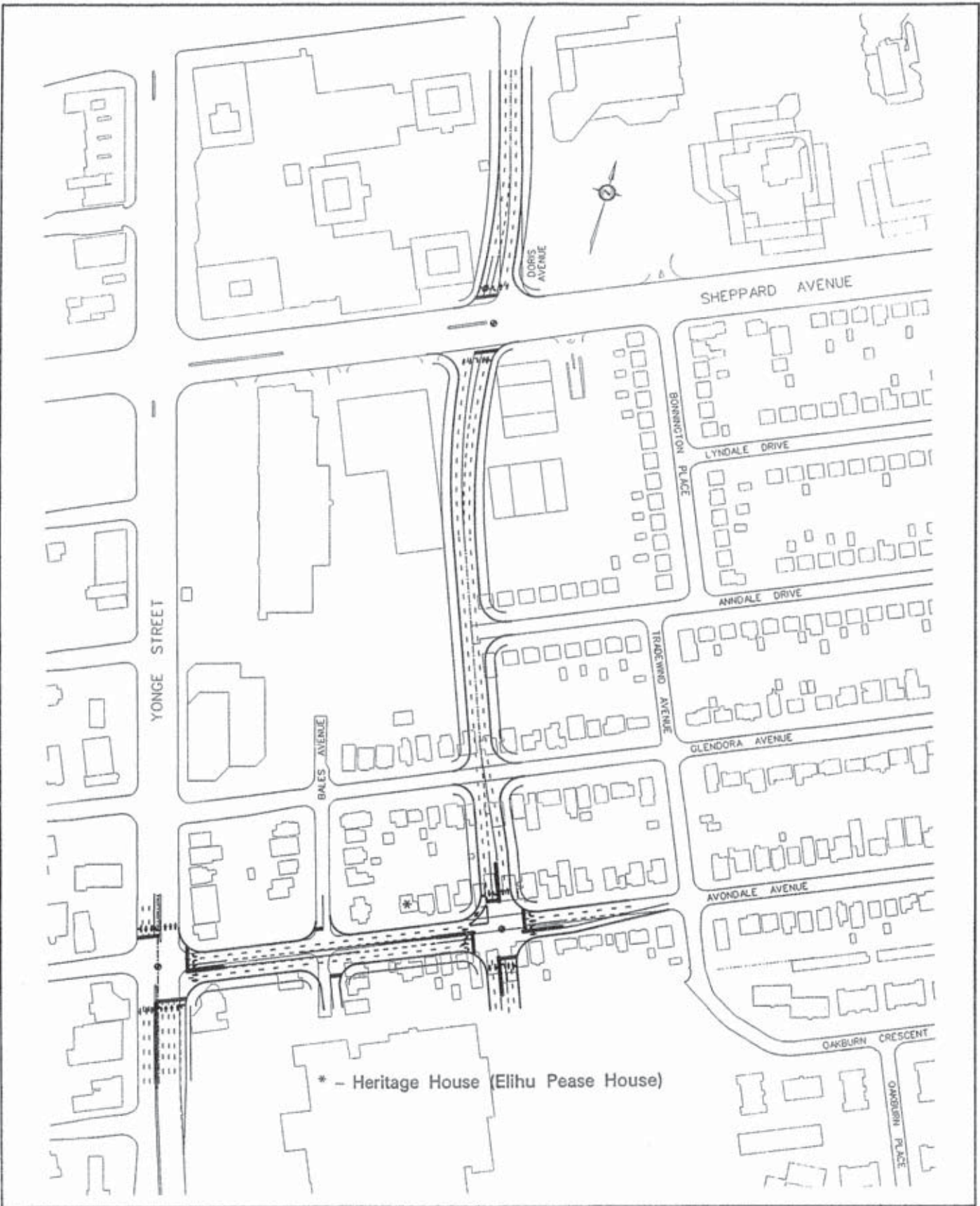
- Establish Future Boundary (boundary of Downtown planning area)
- Traffic Circulation
- Address Potential Transient Traffic (Infiltration)
- Protect for Long Term Development

Impacts to Socio-Economic Environment

- Residential Properties Displaced
- Residential Properties Disrupted
- Business Properties Displaced
- Business Properties Impacted by Partial Acquisition or Construction
- Heritage Features Displaced or Disrupted
- Cost (construction, direct property and direct mitigation)

Indirect Impacts

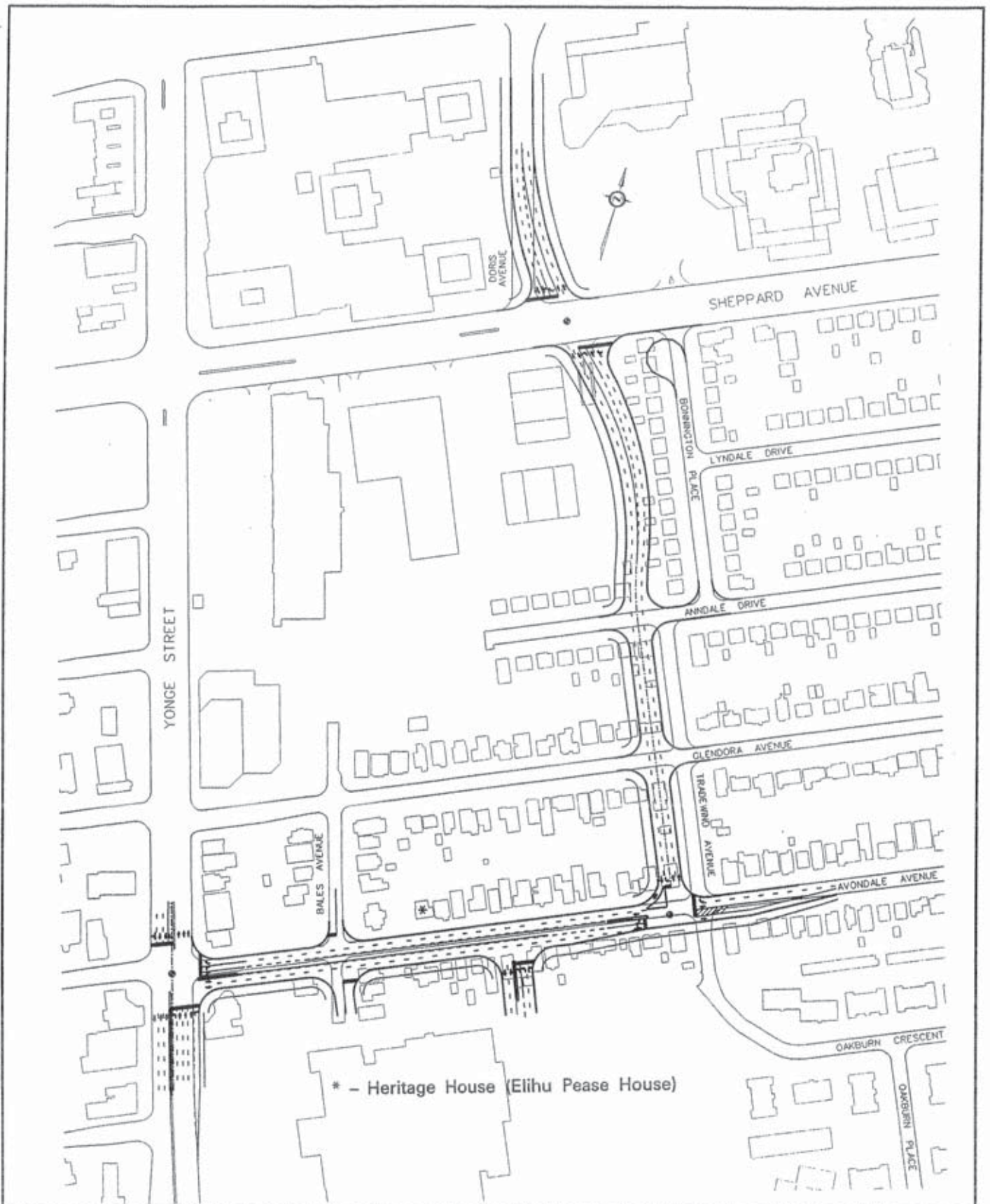
- Noise



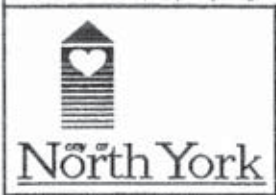
**THE MIDBLOCK
ALTERNATIVE**

**NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY**

EXHIBIT
NUMBER
5.1



* - Heritage House (Elihu Pease House)



**THE TRADEWIND
ALTERNATIVE**

**NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY**

EXHIBIT
NUMBER
5.2

- Air Quality
- Access to Community
- Distance From Yonge Street
- Extent of Encroachment into present residential community
- Proximity to Existing Downtown Plan Boundary
- Future Open Space

Each of the alternatives were considered against the various evaluation factors as seen in Exhibit 5.3. This table outlining the impacts was used in the evaluation and the eventual selection of a preferred alternative.

5.5 EVALUATION OF ALTERNATIVES

The Midblock alternative can be summarized as follows:

- Requires acquisition of fewer homes;
- Requires property acquisition from the Sheppard Centre;
- Requires greater property acquisition from the Marathon development;
- Preserves more of the single family homes within the stable residential area; and,
- Best supports existing planning by being closer to the present Downtown Plan boundary at Yonge Street.

The Tradewind alternative can be summarized as follows:

- Requires acquisition of more homes;
- Requires property acquisition from the MSSB site on the north side of Sheppard Avenue;
- Has less impact on the Marathon development;
- Encroaches further into the present stable residential area; and,
- Is further from the present Downtown Plan boundary at Yonge Street.

In terms of cost, the Tradewind alternative is less expensive than that of the Midblock.

Part 1: Ability to meet the identified problems/opportunities

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Uncertainty of Future Boundary	Provision of a "hard edge" boundary for the Downtown Plan	Yes	Yes	Re-establish certainty for the future of the stable residential neighbourhood
b) Traffic Circulation Doris Ave. & Sheppard Ave. Intersection - Level of Service - Intersection Geometrics (Skew Angle) East Service Rd. & Avondale Intersection - Level of Service - Intersection Geometrics (Skew Angle) - Avondale Ave. & Yonge St. Intersection - Level of Service - Intersection Geometrics (Skew Angle)	Level of Service (AM/PM) Degrees Level of Service (AM/PM) Degrees Level of Service (AM/PM) Degrees	D/D* 75 B/B** 90 D/D* 85	D/D* 70 B/B** 90 D/D* 85	To provide reasonable traffic operations while supporting Stage 1 development.
c) Potential Transient Traffic (Infiltration)	Potential for traffic infiltration into stable residential area	Low infiltration as good traffic flow provided on service road	Low infiltration as good traffic flow provided on service road	To protect stable residential neighbourhood
d) Consistency with Vision	Ability to provide future connections to/from Hwy. 401	Achieved	Achieved	Allow for further intensification of the Downtown south of Sheppard

* Level of Service D is acceptable

** Level of Service B is good



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

ANALYSIS OF
ALTERNATIVES

EXHIBIT
NUMBER
5.3 A

Part 2: Impacts to Socio-Economic Environment

Part 2 of 3

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Residential Properties Displaced	Number of residential properties requiring total acquisition.	19	32	Social impact to homeowner
b) Residential Properties Disrupted	Number of residential properties partially impacted.	2	1	Social impact to homeowner
c) Business Properties displaced	Number of business properties requiring total acquisition.	0	0	Disruption to business
d) Business Properties impacted by partial acquisition or construction	Number of business properties partially impacted.	4	2	Disruption to business
e) Heritage Features Displaced or Disrupted	Number of heritage features impacted.	0	0	Heritage features are an important part of any community
f) Cost (construction, direct property and direct mitigation)	Today's dollars (1995)	\$12.9 Million	\$12.2 Million	Infrastructure improvements must be paid for



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

ANALYSIS OF
ALTERNATIVES

EXHIBIT
NUMBER
5.3 B

Part 3: Indirect Impacts

Part 3 of 3

EVALUATION FACTOR	INDICATOR	MIDBLOCK	TRADEWIND	WHY THIS FACTOR IS IMPORTANT?
a) Noise	Noise level at first row of houses adjacent to road based on ultimate traffic reassignment	64 dBA	62 dBA	To identify potential noise impacts
b) Air Quality	Qualitative Assessment	Within MOEE guidelines for NO ₂ and CO	Within MOEE guidelines for NO ₂ and CO	To identify potential air quality impacts
c) Access to Community	Qualitative Assessment	Good	Good	Allows stable residential area access to Downtown south of Sheppard Road sets boundary of plan
d) Distance from Yonge Street	Distance	200m	300m	Community preservation
e) Extent of encroachment into present residential community	Number of homes	22	52	Supports approved Downtown Plan
f) Proximity to existing Downtown Plan Boundary (Anndale to Avordale)	Distance	Closer	Farther	
g) Future Open Space	Qualitative Assessment of open space linkage	Provides for future linear park Little opportunity for linkage	Provides for future linear park Provides good connectivity to future parks in Anndale & MSSB properties	To help create buffer between stable residential neighbourhood and development



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

ANALYSIS OF
ALTERNATIVES

EXHIBIT
NUMBER
5.3 C

However, the direct impacts of either alternative can be mitigated. The difference in cost is not considered significant in choosing between alternatives.

Through the "Master Plan" approach, the direct correlation between the road requirements and the development potential of the "plan" is identified. The Midblock alignment best supports the ultimate development levels of OPA 393 within the context of the North York Centre and is therefore, recommended.

5.6 RECOMMENDATIONS

The Midblock Alternative is recommended as the preferred road alignment for the east service road. Therefore, the total transportation infrastructure required includes a northbound right turn lane on Yonge Street at Avondale Avenue, Avondale Avenue widened (south side only) to five lanes from Yonge Street to the Midblock alignment and a four lane roadway from Avondale Avenue to Sheppard Avenue along the midblock corridor.

The timing of the construction for part or all of the transportation infrastructure improvements is dependent on private sector development and as such, is unknown.

It must be continually recognized that the east service road is an important component of the overall road network for the North York Centre Plan and should not be dismissed. It is required to support the traffic demands of significant development in the southeast quadrant of Yonge Street and Sheppard Avenue, and as a result, satisfy the ultimate traffic volumes of the North York Centre.

More immediate, but limited, development could occur with only the widening of Avondale Avenue and certain improvements through the intersection of Avondale Avenue with Yonge Street, providing that satisfactory traffic control measures are implemented to address traffic infiltration of the Avondale Community.

Chapter 6 of this study discusses the details of these infrastructure improvements.

5.7 ISSUES AND CONCERNS

This section outlines public comments received at or since Public Information Centre #2 in relation to the Midblock Alternative being identified as the preferred design.

A number of submissions questioned why the Tradewind alternative did not fully utilize the existing Tradewind right-of-way. While this concept was considered during the generation of the alternatives, it was dismissed for several reasons.

One of the planning principles considered was to use the service road to establish the 'hard edge' boundary between the stable residential community to the east and the lands for redevelopment to the west similar to the development of the service road north of Sheppard Avenue. Using the existing Tradewind right-of-way does not provide adequate distance for an open space buffer area which will reduce in part, the impact of traffic on the service road, to the community. To be consistent with the Downtown Plan at least 12 metres would have to be acquired to the east of the right-of-way to satisfy certain separation requirements. The acquisition of additional property to the east is a further encroachment into the stable residential community.

Another function of the service road is to separate the development related traffic from the local road system. While there could be some interim benefits by using the Tradewind right-of-way, Tradewind Avenue is a local road, outside the boundary of the 'plan' and therefore, does not conform with the Community Impact Criteria, and cannot be used as part of the road requirements in support of the plan.

Further comments suggested that the Tradewind alternative could have used the Metropolitan Separate School Board (MSSB) lands on the north side of Sheppard Avenue to reduce the impact on the North York Square at 45 and 47 Sheppard Avenue East. This concept was addressed and dismissed for several reasons.

While the actual building of the MSSB is towards Greenfield Avenue and Doris Avenue, the school board has a limited amount of frontage along Sheppard Avenue from which it takes its address (80 Sheppard Avenue East). The lands which front on Sheppard Avenue have been developed with extensive landscaping and the manner in which the open space has matured has created valuable open space to the Downtown area.

A change from the Sheppard Avenue address is of serious concern to the MSSB as is the loss of open space which cannot be mitigated. However, the impacts on the North York Square can be mitigated with the acquisition of adjacent residential property. This additional property can be used for the replacement and modification of both the underground and surface parking areas and/or the replacement of open space.

6.0 THE RECOMMENDED DESIGN

As discussed in the previous chapter, the Midblock Alternative has been selected as the preferred east service road alignment. Therefore, the recommended infrastructure improvements include, a northbound right turn lane on Yonge Street at Avondale Avenue, a widening of Avondale Avenue to five lanes, and an extension of the east service road south from Doris Avenue to Avondale Avenue midblock between Tradewind Avenue and Yonge Street. This section of the report will serve as a forum for discussing and displaying engineering work that has been completed on the recommended infrastructure improvements.

6.1 ROADWAY

6.1.1 Cross-Section

A typical cross-section was developed for the east service road as seen in Exhibit 6.1. This section includes four 3.5 metre lanes with a 6.0 metre boulevard and concrete sidewalk on either side of the street. The typical section on Avondale Avenue is similar except there is a fifth 4.5 metre turning lane in the centre. On Avondale there will be no change to the boulevard on the north side of the street but the south side boulevard will be 6.0 metres wide including a 1.5 metre concrete sidewalk.

6.1.2 Horizontal Alignment

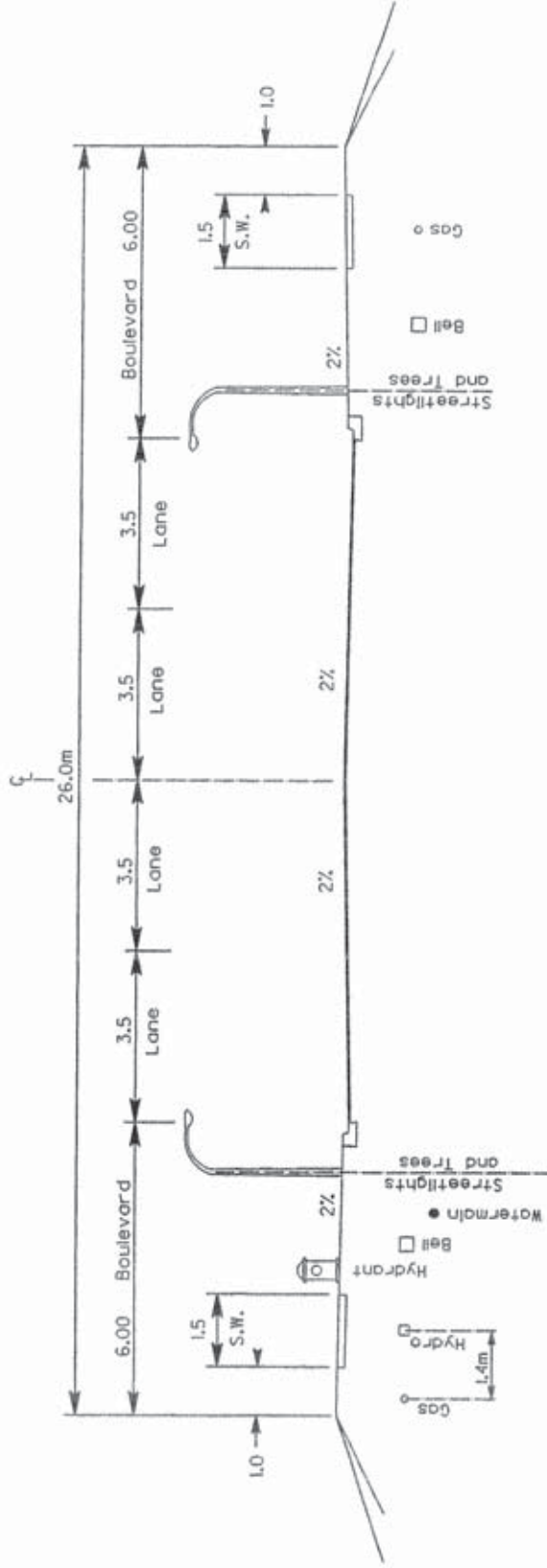
The details of the horizontal alignment for the proposed improvements can be seen in Exhibit 5.1 in Chapter 5 of this report.

6.1.3 Vertical Alignment

The vertical alignment of Avondale Avenue will be unchanged from the existing. The vertical alignment of the Midblock east service road will connect to Avondale at the south and Doris at the north and will follow closely to the existing ground. A detailed profile will be developed at the time of detail design.

6.2 PROPOSED DRAINAGE SYSTEM

The drainage on all the roads within this undertaking will be by urban storm sewer and catchbasin. On Avondale the existing stormwater system will be modified to accept the widening. On the east service road, a new storm sewer system will be



N.T.S.



North York

NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL ASSESSMENT STUDY

TYPICAL
CROSS-SECTION FOR
EAST SERVICE ROAD

EXHIBIT
NUMBER
6.1

constructed and connected to the existing systems at the north and south. The details of drainage will be finalized during the detail design of these roads.

6.3 RIGHT-OF-WAY REQUIREMENTS

On Yonge Street Metropolitan Toronto requires approximately 4.0 metres of property and additional daylighting for the northbound right turn lane at Avondale Avenue.

On Avondale Avenue, there is no property required on the north side of the street, but an additional 10.0 metres of right-of-way is required on the south side. It should be noted that a number of these residential properties have been acquired by the developer and the remaining properties are in the process of being acquired.

For the east service road, the basic right-of-way requirement is 26.0 metres. At the Avondale Avenue end of the road, the property requirement is for 30.0 metres (an additional centre left turn lane) and at the Sheppard Avenue end the property requirement is for 28.0 metres.

Exact property requirements for this project will be determined during the detail design of the road network.

6.4 UTILITIES

The existing storm sewer system on Avondale Avenue will be modified to accommodate the widening of the road. On the east service road, a new storm sewer system will be constructed and connected to the existing systems on Avondale Avenue and Sheppard Avenue.

It is not known at this time what the requirements are for sanitary and watermain services on the east service road to support future development. This will be determined as development occurs.

On the south side of Avondale Avenue, the utility poles (bell, hydro and luminaires) will require relocation as a result of the widening.

Specific details will be supplied to each affected utility company during the detail design stage of the project to determine necessary plant relocation.

6.5 PRELIMINARY CONSTRUCTION COST ESTIMATE

Preliminary quantities and construction costs were developed at the alternative evaluation stage of this project. These included costs for every component of the infrastructure improvements excluding property acquisition, utility relocation, construction staging, and removal/replacement of roadside trees. The following is the construction cost of the preferred alternative including the Midblock east service road, the widening of Avondale Avenue and the northbound right turn lane on Yonge Street.

Removals

Remove Curb and Gutter	m	\$5.00	810	\$4,050
Remove Concrete Sidewalk	m2	\$5.00	590	\$ 2,950
Remove Asphalt	m2	\$5.00	5160	\$25,800

Roadway

Base (Granular 'A') - 200mm	t	\$12.00	6210	\$74,520
Sub Base (Granular 'B') - 600mm	t	\$10.00	15530	\$155,300
Asphalt Base - 80mm	t	\$42.00	2560	\$107,520
Asphalt Top - 40mm	t	\$52.00	1280	\$66,560
Sub Drain	m	\$12.00	1420	\$17,040
Concrete Curb and Gutter	m	\$40.00	1720	\$68,800

Sewer and Watermain

Storm Sewer (incl. catchbasins)	m	\$160.00	810	\$129,600
Sanitary Sewer (assumed)	m	\$128.00	400	\$50,000
Watermain (assumed)	m	\$150.00	400	\$60,000

Boulevard Treatment

Sodding	m2	\$5.00	5030	\$25,150
Trees and Landscaping	Each	\$200.00	53	\$10,600
Concrete Sidewalk	m2	\$40.00	1880	\$75,200
Light Standards	Each	\$6000.00	16	\$96,000

Traffic Lights

Traffic Signals	Each	\$80,000	3	\$240,000
-----------------	------	----------	---	-----------

Engineering and Contingency

At 25%				\$302,273
Total Construction Cost				\$1,511,000

This construction cost is preliminary only. Detailed costing will be completed as a part of the detail design assignment.

6.6 NOISE

An environmental noise impact analysis has been conducted by the engineering firm of S.S. Wilson and Associates.

As a result of the Midblock Alternative running through a residential neighbourhood, at a number of houses the change in the level of noise is considered marginally significant with noise levels increasing closer to the east service road. In some instances, those houses directly abutting or adjacent to the road right-of-way experience significant change.

The introduction of a new noise source, i.e., traffic on the east service road, particularly during rush hours, produces a noticeable increase over the existing ambient levels. Change to the ambient is one of the criteria used in evaluation of noise impacts when considering a project.

The Ministry of Environment and Energy and the Ministry of Transportation have a protocol and policy for addressing noise impacts which establishes a 55 dBA level as desirable for new or retrofit highway projects. The protocol is general and does not distinguish between urban and suburban settings, but the policy sets guidelines whereby increases up to 5 dBA above the ambient are considered insignificant and therefore mitigation measures are not required. However, increases greater than 5 dBA, require an investigation for implementing mitigation measures within the road right-of-way. Mitigation is warranted only if the project costs are not significantly affected and if the measures are capable of producing 5 dBA or more reduction in sound exposure. Measures which produce less than 5 dBA attenuation at the first row of houses are not considered cost effective.

The North York Centre is a Major Metropolitan Centre, and its activities are more in keeping with the normal five day business week with the highest noise levels coincident with the established peak period hours. Therefore, changes to the ambient should not be considered as the primary factor or the only factor when examining the noise impact of the east service road without reference to the absolute noise levels.

More appropriately, the absolute levels (real levels) generated by traffic during the peak hours are considered acceptable in the context of developing an "urban centre".

During the night (11:00 p.m. - 7:00 a.m.) sound exposures close to the service road are expected to be consistent with an urban residential neighbourhood and in most cases will be within the MOEE nighttime sound exposure guideline limits for new development.

Daytime (7:00 a.m. - 11:00 p.m.) sound exposures close to the east service road are expected to be similar to those experienced by residents close to a mixed-use (commercial/residential) environment.

It is important to note that the most significant changes in traffic noise will apply to a relatively small number of residences immediately adjacent to the east service road.

The implementation of linear parks and buffer area, by the introduction of distance, can provide reductions in traffic noise, and may be considered at a later date.

Noise walls can effectively mitigate noise impacts, however, the height of such walls would be in the range of 2 to 4 metres. Flanking the community with noise barriers can create shadowing, visual intrusion, security concerns, wind activity and snow drifting. For the above reasons, noise walls are not preferred.

Berms can be effective, but the primary concern is of providing sufficient width in the buffer area in order to achieve the necessary height. The slope of the berms would have to be in a reasonable range having a maximum grade of 4:1. This will allow maintenance, reduce erosion and be conducive to planting a variety of vegetation.

Again, it must be recognized that the road network for the Downtown and the Uptown Secondary Plans also had areas where noise increases were identified to be marginally significant but in comparison with the overall benefits by developing the plans, the increase in noise levels has been accepted.

The City of North York will work with affected parties to discuss the issue of noise in an attempt to establish reasonable compromise when necessary. However, as the infrastructure improvements recommended in this report depend on development, and as the economic climate is not favourable for the development industry at this time, the scheduling for and the phasing of construction of any part of the network

is unknown. Therefore, immediate discussion may not be necessary but should be considered prior to scheduling of road construction.

The report entitled "Noise Impact Assessment for the Proposed East Service Road South Downtown Planning Area", dated April 19, 1996, is appended to this ESR - Appendix C.

6.7 AIR QUALITY

Rowan Williams Davies and Irwin Inc. (RWDI) was retained to address air quality concerns resulting from the proposed transportation infrastructure.

Air quality concerns were addressed by numerically modelling vehicular emissions of carbon monoxide (CO) and oxides of nitrogen (NO₂) for a representative intersection along the proposed route (Doris Avenue/Midblock and Sheppard Avenue).

It was predicted that for the design year 2020, vehicular traffic along the proposed service road will not produce ambient levels of CO and NO₂ that exceed Ontario's Ambient Air Quality Criteria. This conclusion is based on the results of dispersion modelling under a combination of worst-case meteorological conditions, peak traffic and high background pollutant levels. It is therefore expected that the levels of CO and NO₂ at the receptors examined, as well as for the intersection as a whole, will frequently be less than the values predicted in the air quality study.

The report entitled "Air Quality Assessment for East Service Road North York, Ontario", dated April 30, 1996, is appended to this ESR - Appendix D.

6.8 MITIGATION AT THE DORIS AVENUE/EAST SERVICE ROAD AND SHEPPARD AVENUE INTERSECTION

There are two developments at the Doris and Sheppard intersection that are impacted by the selection of the Midblock service road alignment. These are the North York Square (Marathon Realty Company Limited) and the Yonge-Sheppard Centre (Ellis Don Limited). The following outlines the necessary mitigation as a result of the east service road.

North York Square

The existing Sheppard Avenue access to the development and the ramp to the underground parking will remain unchanged. The location of the new road will require the removal of 59 underground parking spaces and the removal of an underground electrical transformer.

As a part of the mitigation of this impact, the seven properties on the north side of Anndale Avenue, south of North York Square, will be purchased. This will provide sufficient space to replace the 59 underground parking spaces with 66 new parking spaces. In addition, this newly acquired property will provide ample space to add new surface parking facilities and/or replace landscaped green space. The hydro transformer will be moved to a new location within the underground facility. Details of the above can be seen in **Exhibit 6.2**.

Yonge Sheppard Centre

The proposed undertaking will require the removal of 24 underground parking spaces from the Yonge Sheppard Centre. Mitigation of this impact will be negotiated between the owners of the Yonge Sheppard Centre and the City of North York.

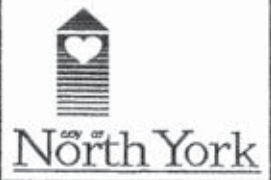
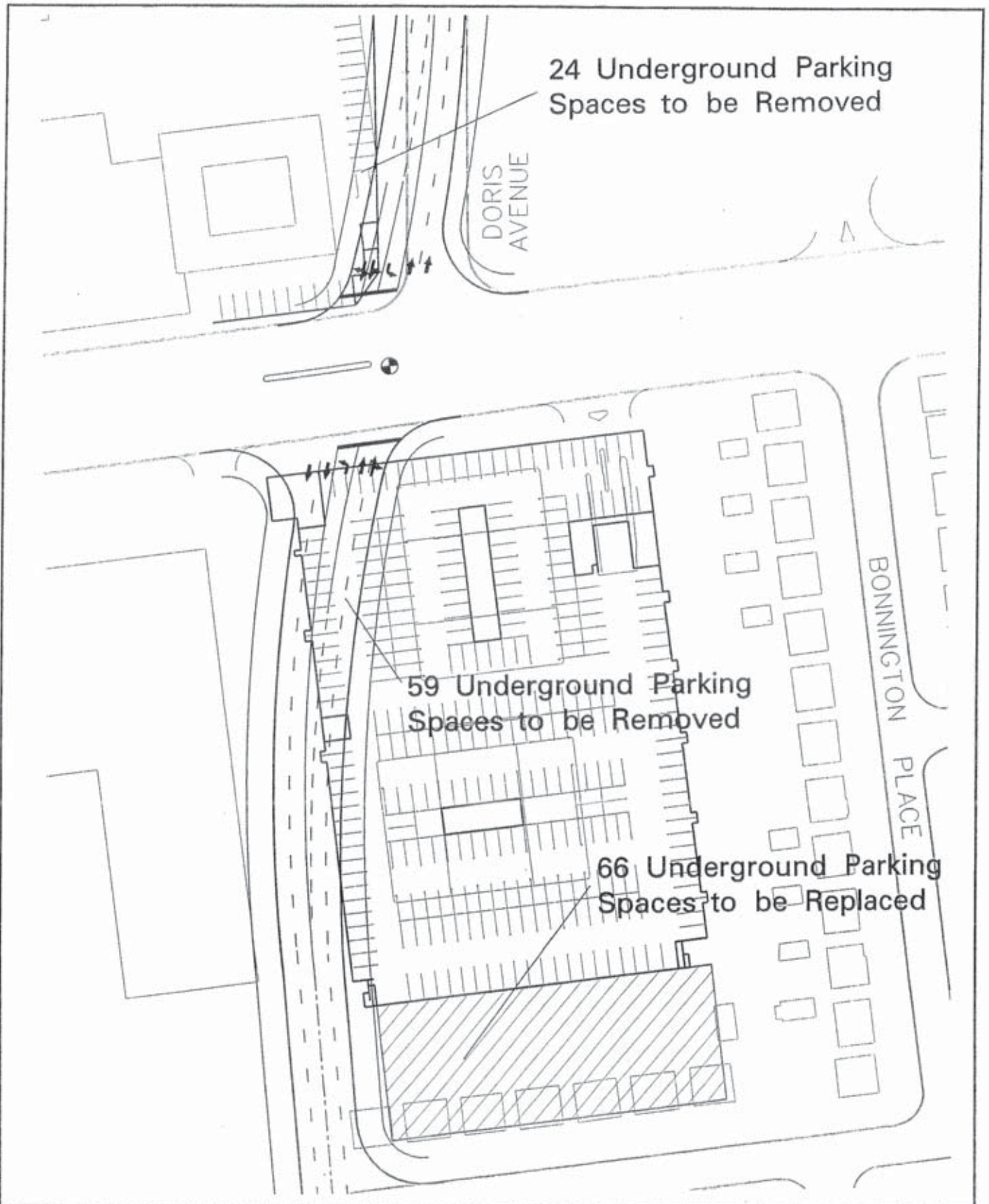
6.9 POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The recommended alternative effectively mitigates any measurable environmental concerns related to this project.

6.10 COMMITMENTS TO FURTHER WORK

Upon approval of this study, the City of North York will commit to several specific actions as part of the detail design and construction of this project. It should be noted that the timing of construction of the transportation infrastructure improvements is dependent on private sector development and as such, is unknown. The specific commitments are as follows:

- Detailed design plans will be developed illustrating proposed stormwater management measures for review and approval by the Ministry of Environment and Energy, the Ministry of Natural Resources and the Metropolitan Toronto and Region Conservation Authority ;
- The required relocation of utilities will be coordinated with each affected utility company;



**PARKING
RECONFIGURATION FOR
NORTH YORK SQUARE**

**NORTH YORK DOWNTOWN
SOUTH OF SHEPPARD AVENUE
CLASS ENVIRONMENTAL
ASSESSMENT STUDY**

EXHIBIT
NUMBER

6.2

- The City of North York will proceed with negotiations for property acquisition and encroachment agreements with impacted owners as development proceeds and supports the need for the infrastructure. Such negotiations shall include mitigation and compensation; and, .
- The City will continue to develop, in conjunction with individual property and business owners, entrance treatments for their individual driveways during and after construction.