

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. **50 12-98-R091**
Your File/V/Réf.

DATE 15 September 1998

TO/DEST. Co-ordinator, Transportation Committee

FROM/EXP. Director, Engineering Division
 Environment and Transportation Committee

SUBJECT/OBJET **ELGIN STREET REHABILITATION (QUEEN STREET TO
LAURIER AVENUE)**

DEPARTMENTAL RECOMMENDATIONS

That Transportation Committee recommend Council:

- 1. Approve the scope of works contained in this project report;**
- 2. Approve the preliminary design for the project, as detailed in the presentation drawings;**
- 3. Authorize the Environment and Transportation Department to proceed with the relocation of utilities to be determined in the detailed design stage;**
- 4. Authorize the initiation of the public hearing process as required by Sections 297 and 300 of the *Ontario Municipal Act*.**

EXECUTIVE SUMMARY

Elgin Street, from Queen Street to Laurier Avenue, has reached the end of its serviceable life. Pavement maintenance activities are uneconomical. Infrastructure, watermains, sewers, steamlines, etc. require replacement.

This project has been included in the 1999 Urban Road Rehabilitation Programme. Total reconstruction of the right-of-way, including underground facilities and services, is recommended.

The National Capital Commission (NCC), Public Works and Government Services Canada (PWGSC) and the City of Ottawa have direct interest in this project and will participate in its design and construction administratively and financially.

This section of Elgin Street, while under the jurisdiction of the Region, is an important part of the NCC's Confederation Boulevard and therefore, its design will reflect the Commission's urban and landscape architectural standards (sidewalks, boulevards, lighting, landscaping, etc.).

PURPOSE

The purpose of this report is to:

- a. Advise the Transportation Committee of the design process, organization, design criteria and features, design schedule and project organization, as well as the scope of work for the Elgin Street Rehabilitation Project;
- b. Seek the approval of the Transportation Committee for the preliminary design in order that the detailed design may be completed for a construction start in January 1999.

EXISTING CONDITIONS

1. Right-of-Way Cross-Section

The existing roadway is a divided arterial. The typical cross-section of Elgin Street, between Queen Street and Laurier Avenue, consists of a seven lane roadway with a curb to curb width of 27 + m. The west side has an approximate 6 m wide boulevard covered in cobble stones adjacent to a 4.5 to 5 m wide concrete sidewalk. The boulevard area also serves as a tree corridor, bus shelter/stop area and contains street lighting poles.

The east side has a boulevard which varies from 1.5 to 5.5 m in width with gravel and cobble stones. The adjacent asphalt and concrete sidewalk is approximately 1.5 to 5.5 m wide. The east boulevard also includes trees, bus stops and road illumination poles.

The concrete curbs and the roadway pavement structure are both in poor condition and further spot maintenance activities are deemed to be uneconomical.

2. Infrastructure

The infrastructure located beneath the roadway is also in a poor state. The two principal watermains which date from 1916/1917 are in need of replacement. There is a combined storm/sanitary sewer which should be separated. Existing steam lines and chilled water lines require upgrading.

Bell, Rogers Cablevision, Ottawa Hydro, Ontario Hydro, Consumers Gas, AT & T are known to have underground services within the limits of the project. There are no utility services above ground.

3. Traffic Control Signals

All the intersections within the project limits are controlled by traffic control signals:

- a. Elgin at Queen
- b. Elgin at Albert
- c. Elgin at Slater
- d. Elgin at Laurier

4. Topography and Drainage

Elgin Street slopes downward to the south, varying from 0.2 percent to a 5 percent grade. Surface storm water flows captured in catchbasins along the outside vehicle lanes are drained into a combined storm/sanitary sewer system beneath the street.

5. Existing Land Use

The adjacent land uses are each primary focal points:

- a. Chambers Building - NCC Headquarters
- b. British High Commission
- c. Lorne Building - PWGSC offices
- d. Lord Elgin Hotel
- e. First Baptist Church
- f. National Arts Centre (NAC)
- g. Confederation Park
- h. Provincial Court House

6. Heritage and Archaeological Resources

Within the limits of the right-of-way, and at the depths of excavation expected to be required for the rehabilitation of the utilities and roadway structure, no known heritage or archaeological resources are expected to be encountered.

7. Operational Concerns

This section of Elgin Street is operating at, or very near, its vehicular capacity during rush hour periods. There are concerns with respect to pedestrian/cyclist/transit/vehicular conflicts at the intersections. Of the four intersections within the project limits, Elgin at Laurier has the highest number of reported collisions.

8. Geotechnical

The roadway structure is composed of approximately 100 mm of asphalt over 200 to 250 mm of concrete, which is supported by 300 to 1200 mm of granular base and fill material which overlays a clay sub structure. Bedrock is not found within the expected elevation limits of the rehabilitation work.

9. Cycling Facilities

Currently there are no cycling facilities on Elgin Street, although Elgin Street throughout the project limits is designated as an “unsigned on-road cycling route” on the 1998/1999 edition of the Region’s Cyclist Guide Map.

10. Street Illumination

Roadway street lighting is by means of traditional “cobra head” high pressure sodium light fixtures. Several old globe lights remain along the sidewalk in front of the British High Commission on the west side of Elgin Street. New pedestrian level luminaries and new metal halide street lights have recently been installed on new Confederation Boulevard standard poles in front of the NAC on the east side of Elgin Street.

11. Transit

OC Transpo local service runs north-south on Elgin Street, with stops north bound in front of Confederation Park, and south bound in front of the Lorne Building. There is a temporary stop in front of the British High Commission which is displaced from Elgin Street west leg north of Queen Street due to the reconstruction works underway there.

The major east-west downtown transit corridor crosses Elgin Street at Albert Street and at Slater Street.

PROJECT JUSTIFICATION

In the 1998 Capital Budget this section of Elgin Street was identified for the first time as a part of the Core Area Capital Works Rehabilitation Programme. It provides funds for the total reconstruction of Elgin Street, where normal maintenance activities are no longer economically viable. Total reconstruction of the right-of-way is necessary, including underground utilities, curbs, sidewalks, illumination and related facilities.

This street forms an important part of the NCC’s Confederation Boulevard. Leading to the National War Memorial at its northern end, Elgin Street also serves as the southern “gateway” to the NCC’s Ceremonial Route.

PROJECT ORGANIZATION

The rehabilitation of Elgin Street is a component of the Restore the Core Programme, a co-operative undertaking which is focused around the reconstruction of some of the Region's major roads and bridges in the core area. The general interests of various governmental agencies - NCC, City of Ottawa, PWGSC and the Region are co-ordinated through the Core Area Capital Works Committee.

In order to address the direct interests of these agencies a formal project organization and approach has been developed.

All agencies having direct fiscal involvement in this project have appointed their Project Managers to the Project Management Committee, chaired by the Environment and Transportation Department representative.

The general public and businesses in the project vicinity are involved in the project via an extensive public consultation plan, including a Design Advisory Committee, composed of representatives of the pedestrian and cycling communities, adjacent property owners, contributing agencies and maintenance personnel including the Regional Forester.

Design and/or construction traffic issues are reviewed by the Traffic Management Team comprised of Regional staff from Traffic Operations Branch (signals), Safety and Traffic Studies Branch (operations), Ottawa-Carleton Police, transit authorities - OC Transpo, STO as well as traffic representatives from other agencies on an as applicable basis.

Utility concerns are organised through direct contact between the utility companies and the Region's engineering consultant design team.

DESIGN PROCESS AND PROCEDURES

This urban rehabilitation project is considered to be a Schedule "A" type of project under the Class Environmental Assessment (EA) for Municipal Road Projects. Consequently, under the Environmental Assessment Act no further approval is required. Nevertheless, to secure public input, a public consultation process is being followed for this project.

Subsequent to a review by the public, the preliminary design is being presented to the Transportation Committee for review and a public hearing if/as needed.

In 1996, NCC staff provided a preliminary design, including the urban design and landscape architectural features to the Commission's Advisory Committee on Design for information purposes. Should any further design approvals be required, this would be co-ordinated by NCC staff.

Similarly, as they become available, the recommendations of PWGSC and the City of Ottawa will be presented to the appropriate authorities.

INVOLVEMENT OF OTHER JURISDICTIONS AND AGENCIES

The following jurisdictions and agencies have direct interest in this project:

- National Capital Commission
- Public Works and Government Services Canada
- City of Ottawa
- Regional Environment and Transportation Department

Other agencies to be directly affected by Elgin Street Rehabilitation include:

- Ottawa-Carleton Regional Transit Commission
- Utility Companies such as Bell Canada, Ontario Hydro, Ottawa Hydro, Consumers Gas, Unitel, Rogers Cablevision, and Metronet

Formal commitment to the project has been received from the NCC and City of Ottawa, including the fiscal commitment to pay for the design of any elements specifically required by them. PWGSC just recently advised of the desire to join in the undertaking. Cost sharing arrangements will depend on the degree of involvement.

The commitment to pay respective construction costs related to the implementation of requested elements is pending review of the prices received at the time of tender.

PRELIMINARY DESIGN FEATURES

This project will include the complete reconstruction of the roadway, sidewalks, boulevards, lighting, watermain, storm sewer and sanitary sewer on Elgin Street between Queen Street and Laurier Avenue.

Because this section of Elgin Street is part of the Confederation Boulevard, emphasis is given to the landscape and urban design which will be to the NCC's Confederation Boulevard standards, including granite curbs, boulevards containing continuous tree pits to sustain long term development of the abundant tree plantings therein, cobblestone surfaces on medians and boulevards, concrete sidewalks with a unique scoring pattern identifiable with Confederation Boulevard, and fluorescent pedestrian level lighting and metal halide street lighting fixtures mounted on decorative poles which will provide ambient lighting levels to the NCC's Confederation Boulevard standards.

In accordance with the general guidelines of the Regional Official Plan, the development of the proposed design cross-section must service the traffic demands of pedestrian, cyclist, transit and vehicular modes of travel.

1. Pedestrian

From the pedestrian perspective, modifications are proposed as follows:

- a. An increase of approximately one meter in the width of the sidewalk on the east side of Elgin Street. This additional width will be most evident in the sidewalk section between Albert and Slater Streets, where the sidewalk currently abuts the outside wall of the underground parking garage of the NAC.

The additional width is achieved through the reduction of vehicular lane widths and median dimensions.

- b. The sidewalk area immediately to the south of the NAC parking garage is widened and a distinct curb line is defined in order to identify the pedestrian versus vehicular zones at the entrance. This is achieved in part by the removal of the short right turn lane north bound on Elgin at the NAC parking garage entrance.
- c. All pedestrian zones will be easily identifiable by their concrete surfaces, including all cross walks at intersections.
- d. Pedestrian crossings of Elgin Street will be reinstated on the south side of Albert Street and the north side of Slater Street.
- e. Curb radii will be reduced to that required to service inter city buses. This will result in reduced crossing distance for pedestrians traversing vehicle traffic lanes. This will be augmented by reductions in crossing distance which come as a result of reducing vehicular lane widths and median dimensions.
- f. Measures are proposed which will prohibit vehicles from parking on and/or travelling along the sidewalk in front of the Lord Elgin Hotel.
- g. Alterations to the traffic control timing at the intersection of Elgin at Laurier, will isolate the south bound to east bound left turn movement from Elgin onto Laurier so that it will no longer be in conflict with the pedestrians crossing north-south over Laurier Avenue on the east side of Elgin Street.

2. Cyclists

Discussions with representatives of the cycling community have lead to the incorporation of 4.5 m wide “joint use” curb lanes in the design. These elements are endorsed by the Regional Cycling Advisory Group (RCAG).

3. Transit

The design addressed two transit issues. Firstly, OC Transpo local service north-south on Elgin will remain, with new platforms and shelters built to Confederation Boulevard standards in place of the existing ones. Secondly, bus traffic destined for the Lord Elgin Hotel will be provided with a bus loading zone by means of a depressed/offset curb in the traffic lane adjacent to the front of the Hotel. Bus storage will continue to be at the south

side of the Hotel, but access to bus parking will be restricted to in/out off of Laurier Avenue rather than across the pedestrian sidewalk crosswalk corridor on Elgin Street at Laurier.

4. Vehicular

In order to service existing vehicular traffic demand at an acceptable volume to capacity (v/c) ratio, maximum acceptable being 0.9, the lane arrangements which exist on Elgin Street must be maintained. With a forecast ten year growth factor of 1.16, a deterioration in this service can be expected with time. Right-of-way restrictions and the competing needs of other modes of traffic preclude the development of additional vehicle traffic lanes to address this situation.

Vehicular traffic lane widths will be reduced to the following dimensions:

- left turn lanes 3.0 to 3.25 m wide
- straight through lanes 3.25 m wide
- joint use lanes 4.25 to 4.5 m wide

The median south bound left turn lane from Elgin on to Laurier will be lengthened in order to increase the storage capacity of the lane so that the traffic control signal timing may be adjusted to isolate this vehicular movement at the Elgin/Laurier intersection.

INFRASTRUCTURE

The existing 203 mm and 381 mm watermains which date from 1916/1917 will be replaced with a new 610 mm watermain.

The combined 450 mm to 600 mm sanitary/storm sewer, will be split into a new 250 mm sanitary sewer and a separate new 600 mm storm sewer.

Steamlines and chilled water lines crossing Elgin between the Lorne Building and the NAC parking garage will be replaced.

Various localized relocations of Bell, Cablevision, Ottawa Hydro, Ontario Hydro and Consumers Gas underground plant may be required as a result of infrastructure replacements in proximity to these existing plants.

It is expected that the underground traffic control signal wiring will be relocated as part of this project.

Many of the underground service leads to buildings along the street will be replaced as well.

GEOTECHNICAL

Additional geotechnical information will be collected during the detailed design phase of the project. A substantive roadway structure will be designed based on these findings.

PUBLIC CONSULTATION

Two public open houses have been held for this project, Monday 29 June 1998, and Wednesday 9 September 1998, each from 3:30 p.m. to 8:00 p.m., in the Festival Plaza Boardroom at Regional Headquarters, 111 Lisgar Street. The open houses were advertised in the Ottawa Citizen, the Ottawa Sun and LeDroit. General delivery mail out flyers were sent to the surrounding neighbourhoods, direct mailings went to interested parties and adjacent property owners and a notice board advertising the first meeting was placed on site.

Through these open houses and subsequent communications with the public, the following issues were identified:

- policing of parking during construction should be enhanced;
- increase pedestrian clearance times at Laurier and Elgin;
- reduce through lanes to two per direction;
- increase median width and include vegetation on median;
- add bicycle lanes and enhanced boulevards;
- eliminate double turn lanes;
- meter traffic into and out of the NAC;
- make "avenue of trees" down Elgin from Lisgar to Queen;
- try to eliminate the use of street poles for posters;
- restrict the establishment of new bars/restaurants on Elgin Street;
- integrate bicycle lanes with traffic lanes;
- conspicuously mark pedestrian crossings;
- establish means of discouraging motorists from cutting off pedestrians at the Laurier/Elgin intersection;
- noise control restrictions similar to MacKenzie King Bridge for NAC rehearsals, performances and special events;
- grade and maintain access at NAC ramp at Queen Street and garage entrance ramp at Slater;
- provide dust control around NAC with particular emphasis to the air intake areas;
- involve NAC staff in design committee;
- refurbish Elgin south of Laurier as well;
- improve signal timing for pedestrians at Laurier/Elgin intersection, allow pedestrians to go first;
- formalize the boulevard appearance;
- reduce double left turn lane on Elgin at Laurier to one turn lane;
- tighten up the corner roundings;
- ban all turn movements for vehicles;
- prohibit right turn vehicle movements on red;
- increase pedestrian crossing times;

- Elgin Street has too many traffic lanes;
- make wider medians;
- plant trees on boulevards and medians;
- use weir type catch basins to facilitate cycling movement in the curb lanes;
- develop the section of Elgin between Lisgar and Laurier as a civic space;
- provide explanatory handouts at the meetings;
- positively enforce traffic laws;
- the boulevard alignment south bound on Elgin south of Laurier requires realignment;
- insufficient advance notices of meeting.

The ideas related to landscaping have for the most part been incorporated into the preliminary design. With respect to tree plantings on the median, the NCC has advised that Elgin Street is a principle corridor leading to the National War Memorial. The preference is to maintain a clear view of the Cenotaph from the Elgin Street approach to Confederation Square. In addition, the NCC utilize the median areas to house planter boxes which may be changed from time to time to co-ordinate with various events in the Capital such as the Tulip Festival.

Issues related to pedestrian and cyclist activities have all been addressed in the preliminary design.

Matters concerning vehicular movements and traffic lanes have been investigated, but for the most part are not included in the preliminary design as they would contribute to a breakdown of the core area traffic network which would jeopardise the efficiency of the transit services along and crossing Elgin Street.

Concerns regarding the NAC have been addressed and/or drawn to the attention of NAC personnel.

Topics beyond the scope of the current Elgin Street project have been forwarded to the appropriate agencies for their consideration.

TRAFFIC MANAGEMENT PLAN

The traffic management plan for 1999 will be developed by the Environment and Transportation Department, in consultation with the appropriate agencies to co-ordinate construction activities on all capital projects within the core area. The plan will address traffic re-routing impacts and mitigation measures.

COMMUNICATION PLAN

The NCC, PWGSC and the City of Ottawa have appointed a member to the Regional Environment and Transportation Department communication team.

A communication plan will be prepared for each phase of the project so that business, members of the public who work in the core area, people involved in ground transportation and the tourist industry can anticipate the construction works and associated Traffic Management Plan.

CONFORMITY TO THE TRANSPORTATION MASTER PLAN

The guiding principle from the Transportation Master Plan is the provision of a modal hierarchy with the emphasis on walking, cycling and transit usage. This principle is reflected in the preliminary design for Elgin Street through the proposed sidewalk and traffic lane modifications which focus on the respective needs of these users.

COMMENTS FROM THE REGIONAL CYCLING ADVISORY GROUP

A member of RCAG represents the Group on the Design Advisory Committee for the Elgin Street project. The preliminary plan incorporates their request for “joint use” lanes.

FINANCIAL COMMITMENT AND PROJECT SCHEDULE

The funds for this project have been identified in the 1998 Capital Budget, with design to be complete in 1998, and construction to be carried out in 1999. Specific target dates include:

7 October 1998	Submit project report to Transportation Committee
14 October 1998	Transportation Committee’s report to Council
18 November 1998	Public hearing (if required)
25 November 1998	Council reconfirmation of design (if required)
27 November 1998	Tender contract
16 December 1998	Tender closing
January 1999	Commence construction
December 1999	Construction complete

*Approved by
Jim Miller, P. Eng.*

JBT/cpv

