

**Report to/Rapport au :**

**Transportation Committee  
Comité des transports**

**and Council / et au Conseil**

**June 25, 2013  
25 juin 2013**

**Submitted by/Soumis par : Nancy Schepers, Deputy City Manager/ Directrice  
municipale adjointe, Planning & Infrastructure /Urbanisme et Infrastructure**

*Contact Person / Personne ressource: Wayne Newell, General Manager, Infrastructure  
Services / Directeur général, Service d'infrastructure  
(613) 580-2424 x16002, wayne.newell@ottawa.ca*

---

CAPITAL (17) / CAPITALE (17)

Ref N°: ACS2013-PAI-INF-0010

---

**SUBJECT: MAIN STREET RENEWAL PROJECT (ECHO DRIVE TO MCILRAITH  
BRIDGE)  
ENVIRONMENTAL ASSESSMENT STUDY RECOMMENDATIONS**

**OBJET : PROJET DE RÉFECTION DE LA RUE MAIN (DE LA PROMENADE  
ECHO AU PONT MCILRAITH)  
ÉTUDE D'ÉVALUATION ENVIRONNEMENTALE  
RECOMMANDATIONS**

### **REPORT RECOMMENDATIONS**

**That the Transportation Committee recommend that Council:**

- 1. Receive the results of the Main Street (Echo Drive to the Mcllraith Bridge) Environmental Assessment Study, as described in this report; and**
- 2. Direct staff to finalize the Environmental Study report and proceed with its posting for the 30 day public review period in accordance with Ontario Municipal Class Environmental Assessment process and immediately initiate design of the preferred alternative.**

### **RECOMMANDATIONS DU RAPPORT**

**Que le Comité des transports recommande ce qui suit au Conseil:**

- 1. Prendre connaissance des résultats de l'étude d'évaluation environnementale de la rue Main (de la promenade Echo au pont Mcllraith), décrits dans le présent rapport; et**

- 2. Charger le personnel de mettre la dernière main au rapport sur l'étude d'évaluation environnementale et de le publier pour une période d'examen public de 30 jours, conformément au processus d'évaluation environnementale municipale de portée générale de l'Ontario et de débiter immédiatement la conception de l'option privilégiée.**

## EXECUTIVE SUMMARY

The City of Ottawa has identified the need to reconstruct Main Street (between Echo Drive and the McIlraith Bridge) as an integrated road, sewer and water renewal project, as the existing street infrastructure has reached the end of its life-cycle. A detailed planning and design process commenced in 2012 and considering the applicable Official Plan (OP) policies, it was appropriate for the City to consider a wide range of alternatives for the reconstruction of the surface elements of Main Street. On this basis, the City proceeded to undertake the Main Street Renewal project under the requirements of a 'Schedule C' Municipal Class Environmental Assessment (EA), which enabled a comprehensive review of Alternative Designs for the Main Street corridor. It is expected that construction will commence in 2014 and be completed in 2015.

The southern part of the street is designated in the OP as an Arterial Road, and as such is to, "not only accommodate car and truck traffic, but also serve pedestrians, public utilities, cyclists, and public transit buses" (Official Plan, Annex 1, Section 1.0). North of Clegg Street, the corridor is designated in the Official Plan as a Traditional Mainstreet. Under section 3.6.3.11 of the OP, a Traditional Mainstreet designation requires the City to consider changes such as "lane reductions" when the City is proposing public works in this corridor, to create space within the right-of-way that can assist in the pursuit of community design and transportation planning objectives for these special design-controlled sectors of the City.

Five alternative designs were developed using a methodology that used criteria from 34 planning, transportation, and environmental indicators. The Study Team, which included Delcan and City staff, performed a technical evaluation of the study area. Also considered was input from the project's Working Group, which included City staff, community representatives, businesses and landowners. The team and the working group, and various departments, including Planning and Growth Management, Infrastructure Services and Public Works among others, have determined that Alternative Design 5 was the preliminary preferable option that best meets Council policies and priorities. This preliminary preferred design was subsequently presented at two Public Open Houses on June 17 and 18, 2013 for broad public review.

Following the public input, Alternative Design 5 was selected as the Recommended Plan for the renewal of Main Street. The design includes a range of two and three vehicle lane cross-sections, and features a cycle track through much of the corridor. The opportunity for a roundabout at the Riverdale Drive intersection will be evaluated during the detailed design phase. The cycle track, together with a combination of dedicated bike lanes planned over the McIlraith Bridge, and shared lanes north of Lees

Avenue, will provide a high quality cycling spine route along the entire corridor. This involves a reduction in roadway capacity for vehicles in some sections of the corridor, but on balance the City considers this an appropriate street design choice that will best enable the City's pursuit of a sustainable transportation system in keeping with the OP, Transportation Master Plan (TMP) and the Old Ottawa East Community Design Plan.

The Environmental Study Report (ESR) is to be completed and filed on this basis.

## RESUME

La Ville d'Ottawa a déterminé que des travaux de réfection de la rue Main (entre la promenade Echo et le pont McIlraith) étaient nécessaires, dans le cadre d'un projet intégré de rues, d'égouts et d'eau, car les infrastructures existantes de la rue ont atteint la fin de leur cycle de vie. Par l'entremise du processus de planification et de conception qui a commencé en 2012 et en tenant compte des politiques du Plan officiel, la Ville devait considérer une vaste gamme d'options pour la réfection des éléments de surface de la rue Main. Dans ce contexte, la Ville a entrepris le projet de réfection de la rue Main en respectant les exigences de l'annexe C du processus d'évaluation environnementale municipale, permettant un examen approfondi des concepts potentiels pour le corridor de la rue Main. La construction devrait commencer en 2014 et se terminer en 2015.

La rue est considérée comme une artère dans le Plan officiel. En tant que telle, elle sert « non seulement au déplacement des automobiles et des camions, mais aussi à celui des piétons, des services publics, des cyclistes et des autobus de transport en commun » (Plan officiel, Annexe 1, section 1.0). Au nord de la rue Clegg, le corridor est désigné comme une rue principale traditionnelle dans le Plan officiel. En vertu de la section 3.6.3.11 du Plan officiel, la désignation de rue principale traditionnelle exige que la Ville envisage des modifications comme des « réductions du nombre de voies » lorsqu'elle prévoit des travaux publics dans ce corridor, afin de créer de l'espace dans l'emprise de la rue principale qui favorisera la poursuite d'objectifs de conception communautaire et de planification des transports dans ces secteurs spéciaux de la Ville, à conception contrôlée.

Cinq concepts potentiels ont été élaborés en utilisant une méthodologie ayant recours à des critères provenant de 34 indicateurs de planification, de transport et environnementaux. Le groupe d'étude, qui comprenait Delcan et du personnel de la Ville, a effectué une évaluation technique de la zone d'étude. On a aussi tenu compte des commentaires du groupe de travail du projet, qui comprenait du personnel de la Ville, des représentants de la collectivité, des entreprises et des propriétaires de terrains. Le concept potentiel 5 a été retenu en tant que concept préliminaire préféré. Divers services, y compris Urbanisme et Gestion de la croissance, Infrastructures et Travaux Publics, entre autres, ont déterminé que le concept potentiel 5 était l'option préliminaire préférée qui respectait le plus les politiques et priorités du Conseil. Ce concept préliminaire préféré a ensuite été soumis à l'examen approfondi du public lors de deux portes ouvertes les 17 et 18 juin 2013.

À la suite des commentaires du public, le concept potentiel 5 a été choisi comme plan recommandé pour la réfection de la rue Main. Le concept comprend une gamme de chaussées à deux et à trois voies et comprend une piste cyclable à travers la majeure partie du corridor. Lors de la phase de conception détaillée, on étudiera la possibilité d'un carrefour giratoire à l'intersection du chemin Riverdale. La piste cyclable, avec une combinaison de voies cyclables dédiées, planifiées sur le pont McIlraith, et de voies partagées au nord de l'avenue Lees procurera une voie cyclable principale de grande qualité le long de tout le corridor. Cela entraînera une réduction de la capacité routière dans certaines sections du corridor, mais dans l'ensemble, la Ville considère que c'est un concept de rue approprié qui permettra le mieux à la Ville de favoriser un système de transport viable qui respecte le Plan officiel et le Plan directeur des transports.

Un rapport d'étude environnementale doit être rempli et déposé sur cette base.

### BACKGROUND

Main Street is a designated arterial road between Clegg Street to the north and the McIlraith Bridge (across the Rideau River) to the south. From Clegg Street north to Colonel By Drive, it is designated a Traditional Main Street. The City of Ottawa has identified the need to reconstruct Main Street as an integrated road, sewer and water renewal project, as the existing street infrastructure has reached the end of its life-cycle. The Main Street Renewal project commenced in August 2012 with the purpose of preparing the Functional, Preliminary, and Detailed Design for the reconstruction. The project also includes a portion of Lees Avenue (from Main Street to Chestnut Street) identified for road resurfacing, and a portion of Rideau River Drive (from Main Street to 130m south of Main Street). The proposed works include the introduction, rehabilitation, and/or replacement of various components of the street infrastructure within the rights-of-way. The reconstruction project limits are shown in **Figure 1 – Project Limits** with a thick black line.

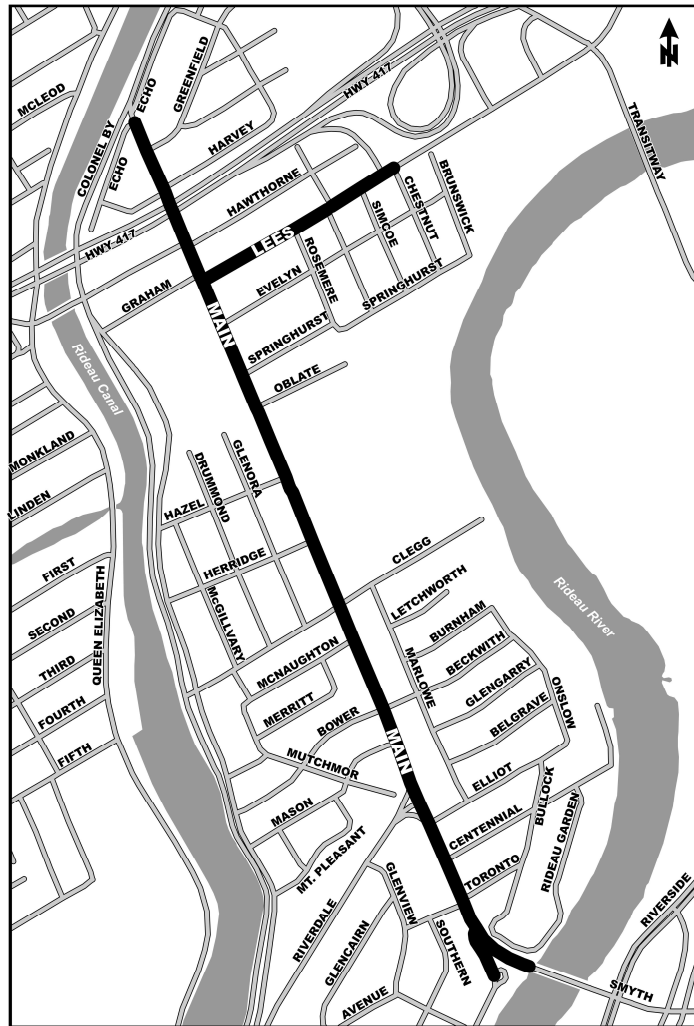


Figure 1 – Project Limits

As Main Street between Echo Drive and Clegg Street is designated as a Traditional Mainstreet in the OP, it's appropriate for the City to consider a wide range of alternatives for the reconstruction of the surface elements of Main Street. On this basis, the City proceeded to undertake the Main Street Renewal project under the requirements of a 'Schedule C' Municipal Class EA, enabling a comprehensive review of Alternative Designs for the Main Street corridor.

The Main Street Renewal project and the EA are being undertaken through an open and consultative planning and design process. A Main Street Renewal Working Group was formed to enable regular consultation with community representatives, businesses, landowners and technical advisors.

The EA examined Five Alternative Designs. The principles used to guide the development and evaluation of the Alternative Designs were based on the City's strategic directions and policies for increased walking, cycling and transit modal share as outlined in the City's OP, the TMP, the City's Regional Corridor Design Guidelines and the policies in the Old Ottawa East Community Design Plan (CDP).

## DISCUSSION

### Existing Conditions

Main Street is a 1.7km, three-lane and four-lane arterial road (two lanes plus turn lane north of Hwy 417) that serves as a north-south link between the McIlraith Bridge and Colonel By Drive. Between Echo Drive and Clegg Street the roadway is designated in the OP Schedule B as a Traditional Mainstreet. The corridor currently accommodates traffic volumes during the off-peak periods that are considered to be below the available capacity of a typical two-lane roadway. The major signalized intersections at Hawthorne Avenue and Lees Avenue are operating near or at capacity during the commuter peak hours. Single directional traffic volumes range between 600 vehicles per hour during the off-peak daytime hours, to 1,200 vehicles per hour during the peak hours. Existing non-auto modal share (walk, bike, transit), measured at the McIlraith Bridge screenline, is less than 6%. Excessive vehicle speeds are a concern in the off-peak period, particularly in the area south of Clegg Street that is not designated as Traditional Mainstreet. The posted speed limit is 50km/h, but 85<sup>th</sup> percentile vehicle speeds of up to 75km/h have been recorded by the City south of Clegg Street. Travel times along the entire length of the corridor are currently in the range of 3 to 5 minutes during peak periods which equates to an average speed of 30 to 40 km/h.

Sidewalks are provided along both sides of Main Street for its entire duration but are less than 2.0m in width in most areas and are even narrower in some areas where the width is 1.4m. The Main Street Renewal project identifies the opportunity to improve these existing sidewalk conditions and the recommended design will enable a minimum sidewalk clear width of 1.8m as required by the City's Accessible Design Standards (November 2012). In addition to the width, the sidewalks are in a substandard condition, and are located on the curb in close proximity to moving vehicles, resulting in a poor pedestrian environment. The channelized right-turn lanes at the Main Street and Riverdale Avenue intersection is a particular concern for crossing pedestrians, due to poor visibility of the west-side crosswalk from the roadway and high vehicle speeds at the intersection.

Main Street is designated in the OP as an On-Road Cycling Route. Cyclists must use vehicle lanes, with no cycling facility provided. For most of the corridor, the curb lane is less than 4.0m in width, or less than the recommended shared curb lane width indicated in the City of Ottawa's Regional Road Corridor Design Guidelines (2000). The City's draft Ottawa Cycling Plan identifies Main Street south of Hawthorne Avenue as a 'Tier 1 Bikeway' - an intended route for a high-quality cycling facility. It is common to observe cyclists riding on sidewalks.

The City is pursuing infrastructure improvements that will enable Old Ottawa East to become a more pedestrian, cyclist, and transit oriented community. Currently, OC Transpo provides service of two regular bus routes that operate on portions of the Main Street corridor. Main Street is not a Transit Priority Corridor. The northern portion of the Old Ottawa East community is within a 600 metre walking distance to the City's planned Confederation Line at Lees Station. The City is also studying pedestrian and

cycling infrastructure needs in the community, including a multi-use pathway along the west side of the Rideau River, and a bridge across the Rideau Canal opposite Clegg Street.

#### Schedule “C” Environmental Assessment (EA) Process

During the initial pre-planning of the project, opportunities were identified to renew Main Street to include sidewalks of sufficient width, in-corridor cycling facilities, improved bus transit environment, and adequate vehicle traffic capabilities.

The range of possible alternatives to meet the City’s transportation planning objectives includes options that involve a reduction in the number of travel lanes in certain locations along the corridor. As defined in the Municipal Class EA, these lane reductions would entail, “Reconstruction or widening where the reconstructed road or other linear paved surfaces will not be for the same purpose, use, capacity or the same location as the facility being reconstructed” and the project value would exceed \$2.3M. Therefore, the combination of the option of reduced travel lanes and the total project value triggered the need to complete the planning and design assignment for the Main Street portion of the project as a Municipal Class EA following the process for a “Schedule C” project.

#### Need/Opportunity Statement

The Main Street Renewal project presents an opportunity to reconstruct the corridor in a manner that best accomplishes the City’s urban and transportation planning objectives. These objectives are set out in the City’s OP and TMP, and associated guidelines, and provide guidance in the identification and evaluation of alternative solutions and designs for the project.

The OP contains various strategic directions that “emphasize both mobility and accessibility”, and state that, “a clear objective of this plan is a substantial increase in the use of public transit and a reduced dependence upon automobile use during peak hours” (section 2.3.1). The OP also establishes increases in the share of travel by walking and cycling to the year 2031. Main Street is a designated Arterial Road, and is intended to “carry large volumes of traffic over the longest distances”, while recognizing that, “they not only accommodate car and truck traffic, but also serve pedestrians, public utilities, cyclists, and public transit buses” (Annex 1, Section 1.0).

The OP also includes a special designation for Main Street between Colonel By Drive and Clegg Street, as a Traditional Mainstreet. For such areas, Council has established this policy:

*Where the City is proposing public works within a Mainstreet’s right-of-way, it will consider changes such as the institution of on-street parking, improvements to the pedestrian and cycling environment, streetscape enhancements, lane reductions and measures to enhance transit ridership in the area. (Section 3.6.3.11)*

The City’s TMP provides city-wide transportation planning objectives and targets. Key policy direction in the TMP that is relevant to the project includes:

- **Road Design:** The City has developed and will apply design guidelines to ensure that all road corridors support adjacent land uses, enhance safety, offer supportive environments for walking, cycling, and transit use, provide adequate lighting and maximize greening opportunities. (Executive Summary, Page vii)
- **Area Traffic Management:** Area traffic management preserves quality of life by mitigating undesirable effects of motor vehicle use, including excessive volumes and speeds, aggressive driver behaviour and hostile conditions for walking and cycling. (Executive Summary, Page viii)
- **City of Ottawa Roads:** The main performance targets for roads is operation at 90% of capacity during the morning peak hour, except in the Urban Core where operation at 100% of capacity will be acceptable. These service targets will always be balanced against the vital requirement for public safety, and may be relaxed in corridors or areas where service levels for transit vehicles, pedestrians or cyclists have a higher priority (Executive Summary, Page vii)
- **Road Corridor Optimization:** The City will conduct a program to optimize the operation of freeway and arterial corridors in an integrated manner. It will strive to eliminate bottlenecks that create delay and compromise safety for road users, while also addressing considerations related to property access, vehicular emissions and conditions for walking, cycling, transit and carpooling. (Executive Summary, Page viii)
- **Road Corridor Optimization:** Pursuing targeted service levels for motor vehicle traffic is not the City's sole and primary concern. Public safety is paramount, and service to non-automobile modes may take precedent in transit priority corridors, designated cycling routes, and pedestrian-focused neighbourhoods (Section 6.6, Page 63)

The City's draft Cycling Plan shows Main Street and Lees Avenue corridors as "Tier 1" Cycling Routes recommends the street be reconstructed to accommodate a segregated cycling facility. This is a more enhanced priority for cycling beyond the current 2008 Ottawa Cycling Plan, which designates Main Street as providing on-street cycling facilities of varying priority. The number of cyclists in the past 15 years using the Main Street cycling path has been between 200 to 350 during the day. After opening the segregated cycling facility, it is expected that this number will double within a year and again within three to four years. This means at least 1000 to 1500 cyclists a day. The implementation of other cycling facilities, such as the pedestrian bridge connecting Fifth Avenue and Clegg Street, new development in the area, redevelopment on Main Street, high quality cycling facility on Lees to connect to the light rail station would further increase the cycling numbers.

The City's objective is to achieve a corresponding high-performing cycling facility on Main Street and/or Lees Avenue. This can best be accommodated within the street's narrow (20m) right-of-way if implemented with a lane reduction in certain sections from



two vehicle lanes in each direction to one lane in each direction, with turn lanes where required. A lane reduction scenario will be successful in accommodating the complete range of transportation movements through the corridor, provided that a successful combination of a number of mitigating factors, in regards to vehicle capacity and level of service, such as mode preference shift, peak period spreading, speed reductions, and the possibility of some vehicles choosing to use alternative routes. In addition, the proposed Confederation Line station at Lees will provide non-auto capacity and promote Transit Oriented Development (TOD) in the north portion of Old Ottawa East. In accordance with the area's Community Design Plan, this would include significant planned infill development.

According to the TMP (2008), additional roadway capacity is being planned by 2031 to address the projected deficiency of almost 3,000 passenger car units (pcu) at the Rideau River Central/Queensway Screenline. TMP findings based on an assumed increase in transit modal share of approximately 12 percentile points from 40 to 52% at this screenline. Additional roadway capacity includes one additional travel lane per direction on Highway 417 via the Hurdman Bridge (+1,500 pcu capacity), and two lanes in the form of the Alta Vista Transportation Corridor (AVTC) (+1,500 pcu capacity). Future planning should recognize the potential transportation impact of up to approximately 1,400 new residential units at the Oblate Lands, vacant lands owned by the Oblate Fathers, les Soeurs du Sacré Coeur de Jésus, and Saint Paul University. This community is being planned and designed as a model of TOD within a 600 metre walking distance to the Lees rapid transit station. Upon completion of the Confederation Line, additional capacity will be available on Highway 417.

Ontario's Provincial Policy Statement (2005) is also to be considered. Policy 1.6.5.1 states that, "Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs. Transportation systems are defined as:

*"a system consisting of corridors and rights-of way for the movement of people and goods, and associated transportation facilities including transit stops and stations, cycle lanes, bus lanes, high occupancy vehicle lanes, rail facilities, park'n'ride lots, service centres, rest stops, vehicle inspection stations, intermodal terminals, harbours, and associated facilities such as storage and maintenance."*

EA is being undertaken, in keeping with Council's priorities and the Provincial policy listed above, to identify and evaluate alternative designs that include localized lane reductions coupled with high priority cycling lanes and improved pedestrian facilities and provisions for bus transit, as well as appropriate capability for vehicles.

### Alternative Solutions

Three alternative solutions were developed to address the need and opportunity within the Main Street corridor:

- Alternative Solution 1: Do nothing
- Alternative Solution 2: Perform Remedial Repairs

- Alternative Solution 3: Reconstruct the Street

The three alternative solutions were evaluated against the following principles:

- **Consistency with Official Plan (OP):** A street that fulfills the vision and strategic directions of the City of Ottawa Official Plan;
- **Consistency with Transportation Master Plan (TMP):** A street that safely accommodates all modes as promoted by the Transportation Master Plan.
- **Social Environment:** A street that supports a healthy and vibrant community adjacent to it;
- **Bio-physical Environment:** A street that works in harmony with its natural and physical environment considering its urban context;
- **Economic Environment:** A street that is cost-effective to build, operate and maintain, and that promotes investment adjacent to it.

The Alternative Solutions and recommended Preferred Solution were presented to the study's Working Group and the preferred solution was detailed at the first Public Open House in October 2012 for agency and public input. Based on public and agency consultation, the Preferred Solution to Reconstruct the Street was confirmed for the Main Street Corridor. The following were the key reasons:

- Finding a solution to the corridor's need and opportunities is a high priority, and "doing nothing" is not considered acceptable;
- Although remedial repairs could be completed on the surface elements, the below-grade elements require full depth reconstruction;
- Failure to reconstruct the street would compromise the level of service provided to the community and adjacent lands in regards the provision of both transportation and municipal services and may result in environmental risks;
- Renewing the underground infrastructure, at-grade infrastructure, and streetscape as a single project best addresses the problem, would be more cost effective, and would result in the least environmental impacts on balance; and finally,
- There is a need and opportunity to reconstruct the street to enable it to be consistent with the vision and strategic objectives of the City's Official Plan as well as the Transportation Master Plan.

#### Alternative Designs

Having confirmed the Preferred Solution to "Reconstruct the Street", Five Alternative Designs were identified that respond to the solution and the need and opportunity as presented in the Need/Opportunity Statement Section. Each alternative design included the following basic characteristics and components, as detailed in the Main Street (Echo Drive to the McIlraith Bridge) EA Study

- Renewal of underground municipal services in required locations, including watermains, sanitary sewers, and storm sewers;

- Renewal and/or upgrading of underground private utilities where required (gas, telecommunications, hydro);
- Renewal of road surface, drainage, crosswalks, and traffic signal plant; and
- Renewal of streetscape elements including street lights, sidewalks, landscaping, and other street amenities, in keeping with the street's designation as an Arterial Road and as a Traditional Mainstreet (between Echo Drive and Clegg Street).

The alternatives are comprised of cross-section arrangements that represent the variation in the corridor's opportunities, constraints, and planning designations. The alternatives are distinguished primarily by the following design variables:

- Width of sidewalk and location within the cross-section;
- Type of in-corridor cycling facility;
- Provision for on-street parking;
- Number of vehicle travel lanes;
- Provisions for vehicle turning;
- Location of street lights and utility poles; and
- Amount and location of space for landscaping.

It is important to note that in all alternatives the cross-section includes three vehicle lanes from Echo Drive to Hawthorne Avenue and four lanes from Hawthorne Avenue through to Evelyn Street. This is the existing vehicle lane configuration.

All Five Alternative Designs retain four vehicle travel lanes along Main Street in the three blocks between Evelyn Street and Hawthorne Avenue. This is based on traffic analyses identifying the need to retain four travel lanes to provide for current and anticipated higher traffic volumes at acceptable levels of service through the intersections at Hawthorne Avenue and Lees Avenue, as well as providing for bus stops and bus turning movements. The analyses indicated that lane reductions through this section would result in unacceptable level of service for vehicles and undesirable queuing through these intersections of Arterial Roads. North of Hawthorne Avenue, all five designs also maintain the existing lane arrangement which is one travel lane in each direction, with turn lanes at Greenfield Avenue. This is considered appropriate to meet the vehicle travel demand through the north end of the Main Street corridor. Hence, the EA focuses on the design choices for Main Street south of Evelyn Street.

Planning and Design Principles were developed to guide the development of the alternative designs for the Main Street Renewal Project and to inform the selection of criteria and indicators for their evaluation and impact assessment.

The alternative designs that were evaluated include the following:

- Alternative Design 1: Existing Arrangement
- Alternative Design 2: Wide Shared Lanes
- Alternative Design 3: Addition of Bike Lanes
- Alternative Design 4: Reduced Vehicle Lanes with Turning Lanes and Bike Lanes

- Alternative Design 5: Reduced Vehicle Lanes with Turning Lanes and Cycle Track

The evaluation of Alternative Designs was guided by 34 evaluation criteria that included 65 indicators. These are grouped into three broad categories:

Part A: Land Use, Urban Design and Community Sustainability

Part B: Transportation Sustainability

Part C: Natural and Physical Sustainability

The evaluation criteria were developed and refined having particular regard for the policies in the OP, TMP, and Old Ottawa East CDP, as well as other applicable municipal, provincial, and federal guidelines and standards. A draft list was established and reviewed by the study Working Group for input and refined by the Study Team.

The performance of each alternative was reviewed on an indicator by indicator basis and based on professional judgement of the Study Team. The alternatives were then given an average rating per criterion. The Study Team included subject matter experts in:

- Community planning and design
- Noise, air quality and vibration
- Landscape architecture and visual analysis
- Active transportation and transit planning
- Traffic engineering
- Environmental planning

The assessment results were tabulated to show how the alternatives performed relative to each criterion and each individual indicator for each of the broad categories. Sensitivity analyses were completed to assist in the evaluation.

### Recommended Plan

Based on the criteria-based evaluation of Alternative Designs, the Recommended Plan for the Main Street Renewal project is Alternative Design 5. This Alternative Design incorporates the use of segregated bike lanes, or cycle tracks, along much of the Main Street corridor. The recommended modifications to Main Street based on the Preferred Design 5 are:

Echo Drive to Harvey Street:

- Maintain two lane plus turn lane configuration
- Establish 4.0m shared curb lanes to provide for on-road cycling
- Widen sidewalks and provide streetscaping

#### Harvey Street to Evelyn Avenue:

- Maintain four lane configuration to enable the higher vehicle traffic flows through these critical intersections
- Establish a combination of 4.0m shared curb lanes and cycle tracks to provide for cycling, depending on right-of-way availability (and subject to detailed design)
- Join the contra-flow bike lane on Graham Avenue to a new southbound cycle track
- Widen sidewalks and provide streetscaping
- Pursue minor right-of-way widenings

#### Evelyn Avenue to Oblate Avenue:

- Reduce vehicle travel lanes from four to three (one northbound lane and two southbound lanes)
- Establish cycle track
- Provide on-street parking along both sides
- Widen sidewalks and provide streetscaping
- Pursue minor right-of-way widenings

#### Oblate Avenue to Toronto Street:

- Reduce vehicle travel lanes from four to two, with left-turn lanes at most intersections
- Establish cycle track
- Provide permanent parking bays along both sides, between Oblate Avenue and Clegg Street
- Widen sidewalks and provide streetscaping

#### Toronto Street to McIlraith Bridge:

- Reduce vehicle travel lanes from four to three (two northbound lanes and one southbound lane)
- Establish cycle track southbound and bike lane northbound
- Widen sidewalks and provide streetscaping

The following Figures 2 and 3 provide typical proposed right-of-way cross-sections of Alternative Design 5 at two locations:

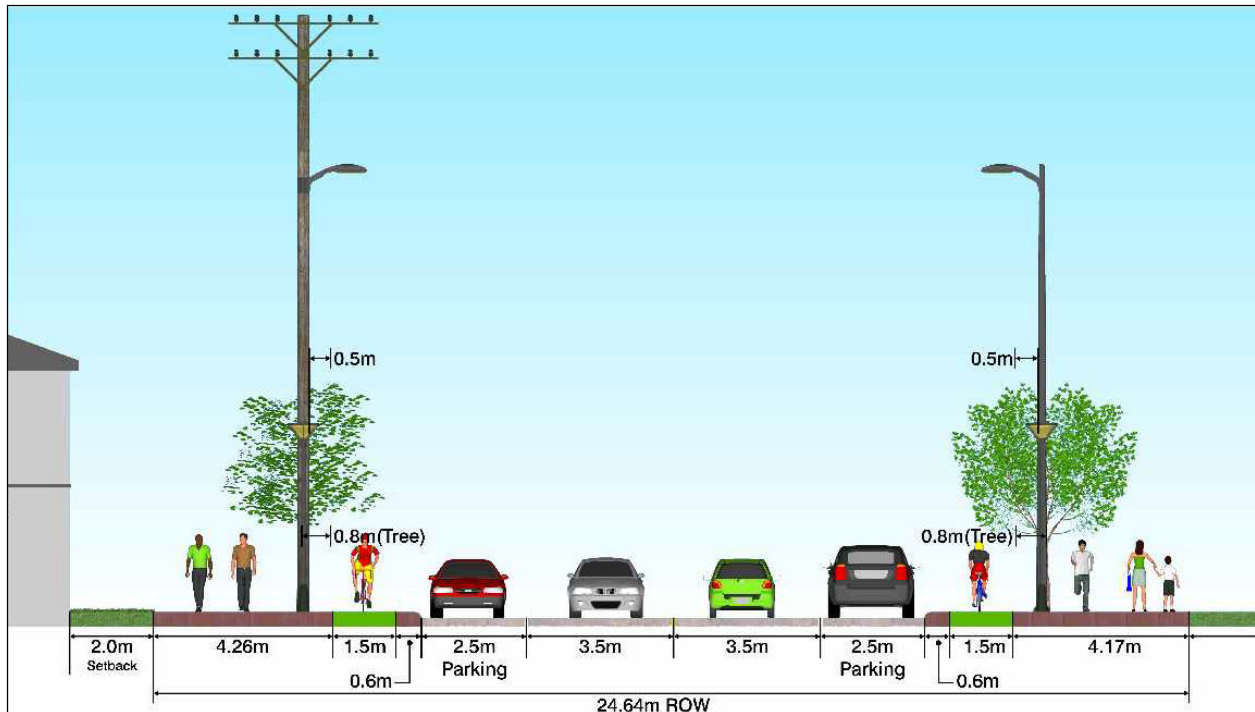


Figure 2 - Alternative Design 5 Cross Section: Main Street between Hazel Street and Herridge Street

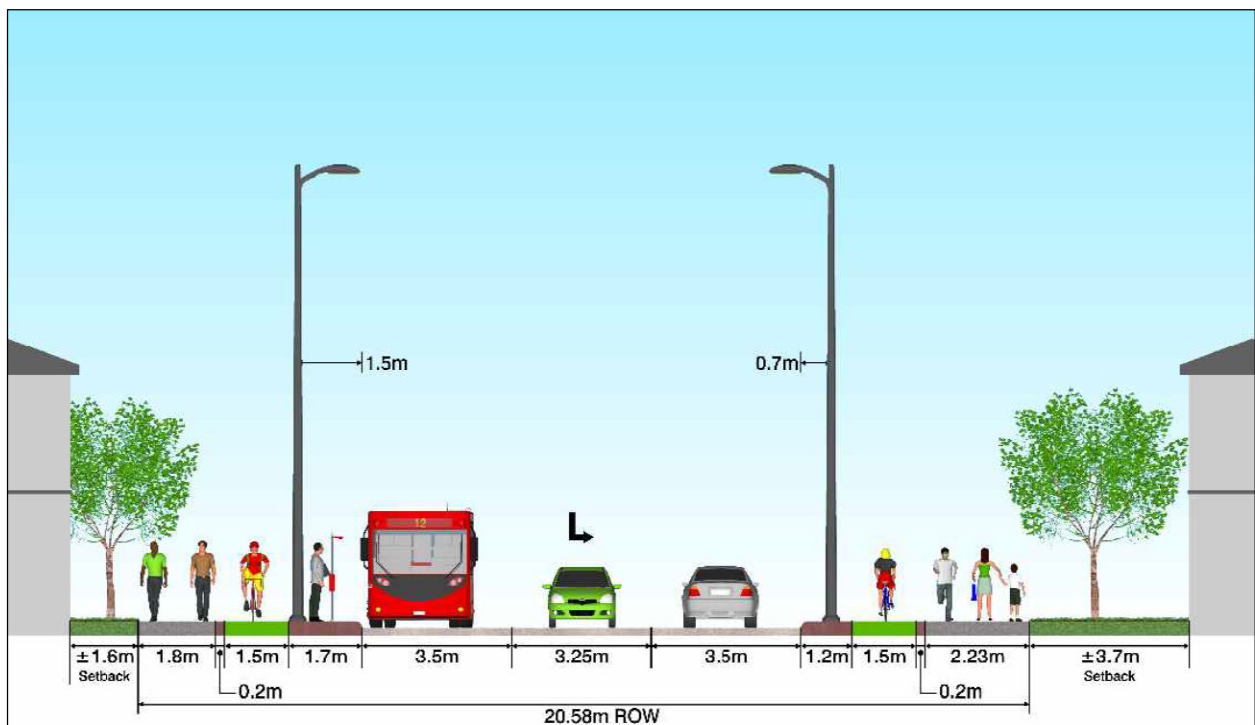


Figure 3 - Alternative Design 5 Cross Section: Main Street at Beckwith Road/Bower Street (North Side)

### Potential for Roundabout at Riverdale Avenue

The Recommended Plan includes a “T” Intersection for Main Street at Riverdale Drive. The base design provides a vastly improved environment over the existing intersection in regards to its performance relative to the criteria and indicators used in this EA. It shortens crosswalks considerably, provides for cycling crossing and space for bus stops and shelters, frees up large land areas for public amenity and has appropriate Level of Service (LOS) for vehicles.

During the development of Alternative Design 5, the possibility of this intersection being designed as a multi-lane roundabout was examined. There is sufficient space available, a roundabout would bring benefits to the base design and create a gateway or node in the southern portion of Old Ottawa East that will have the effect of calming vehicle traffic as well as creating an interesting visual environment. The roundabout has been evaluated as performing well and is recommended to be examined in further detail as a possible design modification to the Recommended Plan that would be determined during the detailed design phase of the project.

### Property Requirements

The Recommended Plan generally can be implemented within the available right-of-way. There are identified locations between Oblate Avenue and the Highway 417 that would be a benefit to the City of acquiring relatively minor right-of-way widening from adjacent properties as noted in the EA. These would enable an improved street cross-section over and above what could be delivered within the existing right-of-way.

### Travel Implications

The following is a summary of the key travel implications of the Recommended Design based on the analysis conducted to date:

- Reconstruction of Main Street with one vehicle lane per direction, will impact the ability to accommodate the existing 1,200 veh/h peak hour vehicle traffic. There would be some segments that would have a vehicle capacity shortfall of up to 300 veh/h (unserved vehicle demand), and extensive queuing is projected;
- Once construction is completed in year 2015, it is anticipated that the proposed cycling/pedestrian-friendly “complete street” design for Main Street would encourage an approximate doubling in the current non-auto modal from 6% to 12%, thereby reducing the unserved vehicle demand to approximately 200 veh/h;
- It is projected that one quarter of this unserved vehicle demand will shift to travel outside of the peak hour, leaving 150 veh/h to be accommodated by alternative travel routes, predominantly Riverside Drive;
- Under the above scenario, Riverside Drive would experience an approximate 10% increase in vehicle traffic and the critical Riverside/Industrial intersection would be operating very close to capacity (if not slightly beyond) during the peak hours;
- Following the opening of the Confederation Line in 2018, it is anticipated that a notable increase in non-auto travel through the Main Street corridor will result,

and that the recommended design supports and compliments the City's investment in rapid transit;

- In the longer term (up to 2031), the current TMP identifies an overall non-single occupant vehicle (non-SOV) modal share target of 50% (i.e., half of all person trips in the National Capital Region are planned to occur through walking, cycling, transit or auto passenger). The recommended plan supports and compliments the City's pursuit of this target;
- The analysis indicates that if the 50% non-SOV TMP target was achieved for travel within the Main Street corridor, plus factoring in a 20% increase in total person travel demand to reflect future growth within the Corridor as a result of anticipated future development outlined in the Old Ottawa East CDP, which includes the Oblates Lands. The projected vehicle traffic volume on Main Street could be accommodated within a single lane per direction with no shift to alternative routes; and
- Should the City-wide modal share target not be achieved within the corridor, and if only a 40% non-SOV modal share is reached, the unserved vehicle demand on Main Street is projected to be approximately 200 veh/h. This is likely to be accommodated by a combination of a modest shift to travel outside of the peak hour and a shift in vehicle travel to Riverside Drive and/or the planned Alta Vista Transportation Corridor (AVTC) (identified as a Phase 2 project in the current TMP, to be implemented before 2022)

### Community Development

The transportation analyses completed in conjunction with the EA acknowledge growth and development anticipated in the Old Ottawa East CDP. This includes notable development anticipated on vacant lands owned by the Oblate Fathers, les Soeurs du Sacré Coeur de Jésus, and Saint Paul University. It is also understood this development will advance over several years, with various development applications required to enable development, supported by Transportation Impact Assessment Studies as required. The City further acknowledges that such studies will be reviewed in the context of the Recommended Plan for the Main Street Renewal, which involves an acceptable reduction of capacity for vehicles while improving capacity for walking and cycling. The plan review context will also consider planned transportation infrastructure in the area including the Confederation Line Lees Station which is within walking distance of Main Street and which will encourage transit-oriented community development.

### RURAL IMPLICATIONS

There are no rural implications associated with this report.

### CONSULTATION

The Main Street Renewal project has been conducted in accordance with the Municipal Class EA as a Schedule 'C' project. At project initiation, a Technical Advisory Committee (TAC) meeting and a Public Advisory Committee (PAC) meeting were held to seek input and identify areas of concern to be addressed through the project.



Members of the TAC and PAC were subsequently invited to form the Main Street Renewal Working Group, whose purpose was to convene at regular intervals throughout the study process to provide input and guidance from technical and community perspectives. The Working Group's contact list included members of the Ottawa East Community Association, the Old Ottawa South Community Association, City of Ottawa Area Traffic Management staff, Saint Paul University, and representatives and their consultants from local businesses and institutions. Between October 2012 and June 2013, a total of 12 Working Group meetings took place.

Two Public Open Houses took place to present the project and the EA's findings to the public. Background information was presented at a Public Open House held on October 17<sup>th</sup>, 2012. Information presented included, existing conditions, the need for the project, and the general solution for the street being a renewal of the street infrastructure. The second and final Public Open House took place at two locations – at Saint Paul University on June 17<sup>th</sup>, 2013, and at the Greenboro Community Centre on June 18<sup>th</sup>, 2013. This second Public Open House presented the results of the EA process, as well as the recommended design and also included a draft Streetscaping plan for the Preferred Design.

Comments received from the public from the Public Open Houses were incorporated into the study where appropriate.

#### COMMENTS BY THE WARD COUNCILLOR(S)

The Councillor for Ward 17 has expressed support for a vehicle lane reduction scenario on Main Street, as demonstrated in Alternative Design 5.

#### LEGAL IMPLICATIONS

There are no legal impediments to implementing the recommendations in this report.

#### RISK MANAGEMENT IMPLICATIONS

There are no risk implications.

#### FINANCIAL IMPLICATIONS

Budget authority for the Main Street Renewal project has been approved within accounts 906579 O-OTM Main St. (Echo-Springhurst) and 906585 O-OTM Main St. (Springhurst-Riv.).

#### ACCESSIBILITY IMPACTS

A primary objective of the Main Street Renewal project is to identify opportunities for improved sidewalk conditions and increased pedestrian and cyclist safety. The Main Street Renewal project's recommended design will enable a minimum sidewalk clear

width of 1.8m, as required for exterior accessible routes by the City of Ottawa's Accessible Design Standards (November 2012). Currently, many portions of the sidewalk on Main Street do not meet this standard, so the recommended design would improve conditions for pedestrians of all abilities.

#### ENVIRONMENTAL IMPLICATIONS

Effects on the environment (Natural, Social, Cultural, Transportation, etc) were comprehensively evaluated as part of the EA.

The most notable effects would be impacts on the transportation system. The Recommended Plan includes appropriate mitigation to minimize environmental effects. The reconstruction of the Main Street corridor to include a cycle track would provide various positive effects including: improved infrastructure reliability, business prosperity, improved pedestrian environment and most notably, an enhanced cycling facility.

#### TECHNOLOGY IMPLICATIONS

There are no technical implications.

#### TERM OF COUNCIL PRIORITIES

The recommendation contained herein aims to support the following Term of Council Priorities approved by Council in July 2011:

- TM3 Provide infrastructure to support mobility choices
- TM4 Promote alternative mobility choices

#### DISPOSITION

Upon Council's approval of the report recommendation, staff will file the required Notice of Completion of the EA and staff will immediately begin design of the preferred alternative, and proceed to construction the recommended alternative for Main St.