

## Attachment # 2

**Council Report Titled  
Ditch Infill and Urban Streetscape in Queensborough  
Strategies and Community Feedback  
March 7, 2016**

# **REPORT**

## *Engineering Services*

**To:** Mayor Côté and Members of Council      **Date:** 3/7/2016

**From:** Jim Lowrie      **File:** 09.1750.01  
Director of Engineering Services

**Item #:** 38/2016

**Subject: Ditch Infill and Urban Streetscape in Queensborough Strategies and Community Feedback**

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### **RECOMMENDATION**

**THAT** the Ditch infill and Urban Streetscape implementation strategies for Queensborough be endorsed; and

**THAT** staff be directed to incorporate the Ditch Infill and Urban Streetscape standards for Queensborough into the Subdivision and Development Control Bylaw.

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### **PURPOSE**

The purpose of this report is to summarize the community feedback received regarding ditch infill and urban streetscape implementation strategies in Queensborough and to seek Council's endorsement of the proposed strategies.

### **BACKGROUND**

Queensborough (QB) is undergoing urban transformation as rural parcels are developed into smaller residential lots or multi-family sites and also as old houses are being replaced with new ones. Many rural streets with open ditches have already been replaced with urban streetscape as part of the redevelopment process. Residents and builders in the historical QB neighbourhoods have expressed an interest to transform their rural streetscape into a more uniform urban environment. A report titled "*Implementation of Ditch Infill and Urban Streetscape in Queensborough*" was presented to Council on September 14, 2015 (Attachment #1) which outlined ditch infill implementation strategies. The report examined

the technical feasibility of ditch enclosure under different implementation scenarios. Four implementation scenarios are:

1. Local Area Service Program (LASP);
2. Subdivision Development;
3. Building Permit; and,
4. Request by individual property owners (where there is no subdivision, building permit, or LASP initiative).

Council passed the following resolutions on September 14, 2015:

*THAT staff be directed to consult with the Queensborough Community with respect to the proposed streetscape improvement implementation scenarios contained within this report; and*

*THAT staff report back on community feedback and to recommend strategies to incorporate urban streetscape standards for local streets in the Queensborough area.*

## **DISCUSSION**

A public open house was held at the QB Community Centre on December 8, 2015 just prior to a QB Residents Association meeting. Information Boards (Attachment #2) illustrating the proposed implementation strategies were presented and also posted on the City's webpage. Fifteen residents attended the public open house. Four feedback forms were received and all were in favour of the proposed approach to implement the Queensborough urban streetscape plan.

The general approach is to permit ditch enclosure on specific streets with developed urban streetscape concepts using properly engineered drainage systems. The streetscape transformation can be implemented gradually through 1) Local Area Service Program, 2) Subdivision Development, 3) Building Permit for new homes, or 4) Request by individual property owners where there is no subdivision, building permit, or LASP initiative. Implementation of the proposed ditch enclosure under a Building Permit application for new home construction will include ditch infill with engineered pipe system and installation of curbs and pavement. Additional streetscape requirements such as sidewalk, street lighting and boulevard trees will be determined on a site-specific basis in accordance with the provisions of the Subdivision and Development Control Bylaw and the street cross-section standards.

In discussion with the attendees and members of the QB Residents' Association, there was general support for the proposed approach to urban streetscape implementation.

**NEXT STEPS**

If the Ditch Infill and Urban Streetscape implementation strategies are endorsed by Council, the next steps are:

- Prepare educational brochures for development inquires;
- Update existing policies; and
- Incorporate the ditch enclosure standards into upcoming amendment to the Subdivision and Development Control Bylaw.

Update of the Subdivision and Development Control Bylaw is included in the staff's 2016 work plan. Amendment to the bylaw will provide clarity and formalize the frontage requirements for subdivision and building permit applications in QB. In-stream building permit applications would be exempted but new applications fronting the identified streets will be notified about the new standards and requirements at the time of building permit application.

**FINANCIAL IMPACTS**

As discussed in the preceding sections, the implementation of streetscape improvements in QB would be funded by development under subdivision/ building permit applications, Local Service Area (LAS) initiatives or by individual owners desiring to enclose their frontage ditch. The costs of the streetscape improvements are site-specific. To address the on-going demand by local residents for enclosed ditches, all building permit applications for new buildings or individual property owner requests will require ditch enclosure with engineered drainage pipe, backfill, pavement and curbing. This represents an incremental cost over a typical driveway culvert with headwalls under current conditions.

**OPTIONS**

1. The Ditch Infill and Urban Streetscape implementation strategies for QB be endorsed;
2. Staff be directed to incorporate the Ditch Infill and Urban Streetscape standards for QB into the Subdivision and Development Control Bylaw;
3. Provide staff with other directions.

Staff recommends options 1 and 2.

**INTERDEPARTMENTAL LIASION**

Engineering and Development Services Departments have collaborated in developing this report.

## CONCLUSION

A technical review indicates that open ditches on many side streets in Queensborough can be enclosed with properly designed services. The ditch enclosure can be implemented incrementally either through infill subdivision, building permit application, a Local Area Service Program or upon individual owner's request.

The proposed implementation strategies were presented at a QB community open house and received positive feedback. The strategies provide an opportunity to meet residents' desires to transform QB into a more urban environment and address ongoing issues such as unauthorized extension of driveways and drainage impediments.

## ATTACHMENTS

1. Council Report titled Implementation of Ditch Infill and Urban Streetscape in Queensborough dated September 14, 2015
2. Queensborough Streetscape Plan Info Session Boards

This report has been prepared by:  
Binega Markos, Engineering Technologist

This report has been reviewed by:  
Eugene Wat, P.Eng., PTOE, Manager, Infrastructure Planning

Approved for Presentation to Council



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Jim Lowrie, Eng.L, MBA  
Director of Engineering Services



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Lisa Spitale  
Chief Administrative Officer

**Attachment 1**  
**Council Report titled Implementation of Ditch Infill**  
**and Urban Streetscape in Queensborough dated**  
**September 14, 2015**

## **REPORT**

### *Engineering Services*

**To:** Mayor Coté and Members of Council      **Date:** 9/14/2015  
**From:** Jim Lowrie  
Director of Engineering Services      **File:** 05.1035.10  
**Report #:** 402/2015

**Subject: Implementation of Ditch Infill and Urban Streetscape in Queensborough**

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#### **RECOMMENDATION**

*THAT the report be received;*

*THAT staff be directed to consult with the Queensborough Community with respect to the proposed streetscape improvement implementation scenarios contained within this report; and*

*THAT staff report back on community feedback and to recommend strategies to incorporate urban streetscape standards for local streets in the Queensborough area.*

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#### **PURPOSE**

The purpose of this report is to provide an approach to address ditch infill issues and to propose urban streetscape implementation strategies for Queensborough.

#### **BACKGROUND**

Queensborough (QB) is undergoing urban transformation as rural parcels are developed into smaller residential lots (down to a minimum 4,000 ft<sup>2</sup> lot size) or multi-family sites. Many rural streets with open ditches have already been replaced with urban streetscape as part of the redevelopment process. Previous public engagement with the QB Community<sup>1</sup> indicated that residents and builders were interested to improve their streetscape by eliminating open ditches, installing sidewalks and street lighting and providing more opportunities for street parking. The City has been examining the technical feasibility of enclosing ditches, improving streetscape and the cost implications.

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<sup>1</sup> A November 2007 public consultation indicated 67% preferred urban streetscape with curb and gutter.

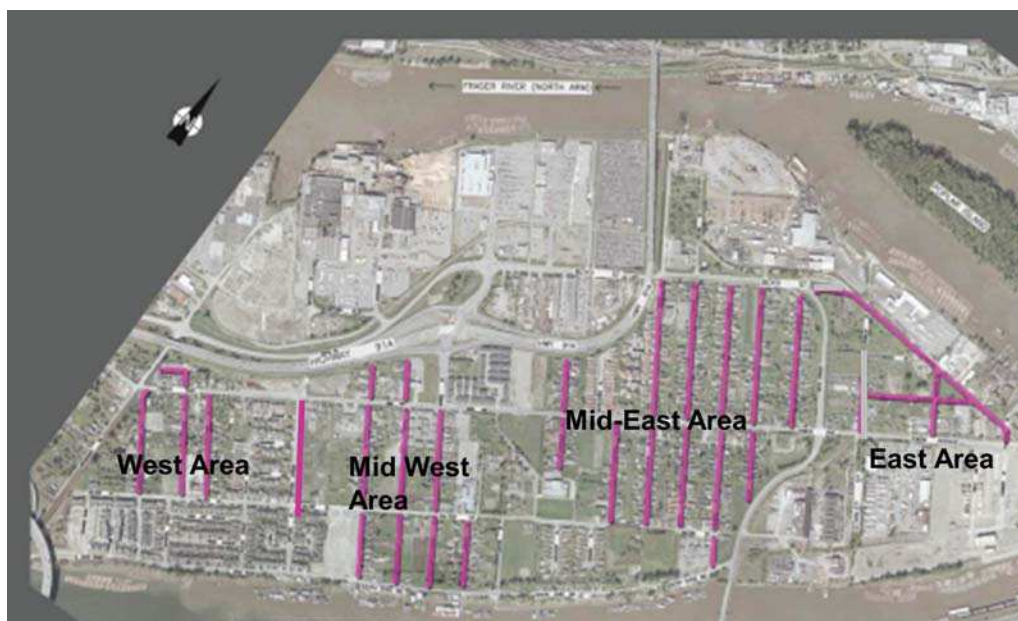
Residents' desire for enclosed ditches has also been noted over the years by the unauthorized extension of driveway culverts. The unauthorized culvert extensions are poorly installed, create impediments for drainage and maintenance and poses potential safety concerns (see Attachment 1). The enclosure of ditches is best planned and undertaken with proper engineered storm sewer system and a process is necessary in response to the growing demand for urban streetscape in Queensborough. Council has directed staff to examine this phenomenon and potential strategies.

## **DISCUSSION**

### **Technical Feasibility of Ditch Enclosures**

Technical analysis have been completed to ascertain feasibility enclosing ditches to accommodate urban streetscape. Phase 1 of the Queensborough Integrated Rainwater Management Plan (IRMP) specifically looked into the hydrological/hydraulic impacts of ditch infill and to propose solutions to mitigate any negative impacts to the overall drainage system.

The technical analysis concluded that the existing local ditches along many side streets of Queensborough, which are generally 0.5 metre to 1.0 metre deep, can be enclosed and replaced with storm sewers. These road ditches are classified as Class C watercourses (not fish habitat and Riparian Area Regulation does not apply). Major ditches and canals such as those along Boyd Street, Hwy 91A, Wood Street north of Ewen Avenue, Carter Street, Stanley Street, Beach Street, Boundary Road, etc. provide essential storage function for the four drainage pump stations and need to remain as open channels. Some of these canals also have important environmental attributes. Figure 1 highlights in purple the streets in Queensborough with open ditches that can potentially be enclosed (the map excludes the major open channels and canals which must remain as open channels).



**Figure 1: Streets with existing open ditches that can potentially be enclosed**



A key issue for ditch enclosure in Queensborough is the need to adequately stabilize the underlying weak soils (peat and silt) coupled with high ground water table to allow for construction of the new streetscape. This process involves either preloading or excavating and replacing the poor soil with light-weight structural materials. Preloading requires prolong fill placement on roadways which is disruptive in built-out neighbourhoods; thus it is easier to achieve and cost effective in a large scale development than in small infill subdivisions. Light weight fill is less disruptive and better suited for incremental ditch enclosures. Final determination on the soil stabilization approach would be site specific and undertaken during the detailed design phase of the works.

### **Status of Streetscape and Ditch Enclosures in Queensborough West Area**

In West Queensborough area such as Phillips Street, Hume Street and Dawe Street have largely been developed to full urban streetscape where open ditches have been replaced with storm sewers, curbs and gutters, sidewalks, streetlights, etc. for the most part. The remaining open ditches will continue to be enclosed as development advances. The east side ditch on Gifford Street will also be enclosed when the adjacent development proceeds. The implementation of ditch enclosure and urban street improvements in the West Area are being undertaken through development process.

### **Mid-West Area**

Similar to the West Area, the mid-west of Queensborough with Jardine Street, Hampton Street and Howe Street are undergoing re-development including subdivisions where the existing ditches are being enclosed and replaced with urban streetscape. The implementation of ditch enclosure and urban street improvements in the Mid-West Area are being undertaken through the development process.

### **East Area**

The eastern portion of Queensborough is undergoing large-scale comprehensive development (i.e. Port Royal and Queensborough Special Study Area) with full urban streetscape. The implementation of ditch enclosure and urban street improvements in the East Area are being undertaken through the development process.

### **Mid-East Area**

The Mid-East Area of Queensborough (i.e. from approximately Lawrence Street to Boyd Street) consists of established small lots on narrow streets with open ditches. The streets include Lawrence, Campbell, Wood, Boyne, Pembina, Fenton, and Johnston. Most of the properties are not owned by developers but individual owners.

Majority of lots in this area are generally small with little potential for subdivision. While a few may be subdivided, they are mostly infill subdivisions (i.e. two lot splits). Achieving urban streetscape in this area has been challenging as ditch enclosure with storm sewers and soil stabilization is difficult to construct on an individual lot basis. In the past, the City has taken the approach to retain the open ditches for infill subdivisions where it was impractical to install an urban streetscape due to the lack of continuous facilities (i.e. drainage and sidewalk) and instead collected cash-in-lieu for the future pavement reconstruction. Completing these works is often postponed indefinitely as the adjoining properties may not be ready for development in the foreseeable future.

The unauthorized and ad-hoc ditch enclosure by property owners as noted earlier have impeded drainage and created safety concerns. Through the analysis, it was determined that a consistent streetscape standard needs to be established on a block-by-block basis or at least a substantial portion of the block to allow stabilization of weak underlying soils, to minimize differential and long-term settlement, to provide a continuous drainage flow path and to allow the construction of sidewalk or pathway. Establishing streetscape standards would allow the road and drainage works to be undertaken in an incremental fashion as lots are improved.

In 2013, the City developed the Queensborough Streetscape and Development Plan. The study looked at drainage, geotechnical and transportation options to address the streetscape of the Mid-East Queensborough area. The plan indicates that most streets, with the exception of Fenton Street<sup>2</sup> south of Ewen Avenue, can be improved by eliminating the ditches. Proposed urban road cross-sections were developed to provide proper drainage and improved accessibility through the provision of sidewalks and pavement widening (see Attachment 2).

The ditch enclosure and urban street improvements can be implemented through infill subdivision, construction of new homes (building permit) or local residents driven initiatives. This is discussed in the following section.

### **Streetscape Implementation Options in Queensborough Mid-East Area**

A street-by-street analysis of the Mid-East area was undertaken to determine the likelihood of urban streetscape improvements being implemented through subdivision or building permit application (see Attachment 3). For lots with older homes (in excess of 40 years), owners may be seeking to rebuild a new house in the not-too-distant future. Potential methods to fund and implement the streetscape improvement are as follows:

#### ***1. Local Area Service Program (LASP)***

For property owners seeking streetscape improvement including ditch enclosure, the works could be implemented as a Local Area Service Program (LASP). This would require a certified petition indicating support for the works signed by at least 50% of the owners of properties representing 50% of the assessed value of land and improvements. A bylaw and local area service tax would be established where property owners can either pay their assessment in one payment or amortize the payments over a 20 year period.

The City may choose to provide financial assistance by cost sharing the LAS costs. Bylaw No. 4327, 1968 has set the benefiting property owner's percentage charge for various types of works (e.g. curb & gutter, sidewalk, road improvement, storm sewer) under Local Improvement, the predecessor to the current Local Area Service program, at 50%.

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<sup>2</sup> Fenton Street has undergone recent ditch and culvert improvements along with new pavement.

## **2. Subdivision Development**

Three possible options of ditch enclosure including soil stabilization and urban streetscape for infill subdivision are:

- i. Undertake full urban streetscape frontage works at the time of subdivision;
- ii. Phasing the work by installing underground works (drainage system, road backfill) at time of subdivision with cash-in-lieu for the remaining frontage services such as curb and gutter, sidewalk, street lighting, etc.; or
- iii. Collect cash-in-lieu for future implementation of all urban streetscape frontage works;

If the future works are undertaken through LAS, the value of the funds on deposit would be credited to the owner of the property at the time of the LAS. This will ensure that any funds received in this manner will be expended only for the purpose for which it was collected.

## **3. Building Permit Application**

Legislation allows a city to require works and services on the portion of a highway immediately adjacent to the site being developed, up to the center line of the highway as a condition of the issuance of a Building Permit<sup>3</sup>. This provision has been utilized in Queensborough to require off-site works and services for multi-family, commercial and industrial buildings at the building permit stage but has not been applied for single family home construction on pre-existing vacant lots, or for building new homes after demolition. The servicing bylaw will need to be amended to require full Works and Services at the building permit stage for new single family dwellings in accordance with the proposed typical cross sections contained in Attachment 2.

## **Proposed Streetscape Implementation Approach in Mid-East Area of Queensborough**

A recommended approach for incremental establishment of urban streetscape frontage is as follows:

- a) For developments involving the entire block or a substantial portion of the block, the full urban streetscape would be required;
- b) For small infill developments including subdivision and building permits, ditch enclosure at minimum will be employed while cash-in-lieu will be collected for the remainder portion of the urban streetscape works and held in trust for future use towards LAS, or when the majority of lots have been developed;
- c) For a LAS initiative, the City will apply the streetscape standard for the subject street and work with the proponents to petition the benefitting area and process the request to Council;
- d) For requests by individual property owner(s) with no development, building permits or collective LAS initiative, owners may apply to enclose existing ditches fronting their home provided that:

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<sup>3</sup> Section 938(7) of the Local Government Act (LGA)

- The proposed work is outside of ditches/canals identified as “major” under the City’s Drainage Master Plan;
- Soil stabilization and storm drainage are designed and supervised by a geotechnical/civil engineer;
- Work may also include minor road widening and installation of curbing;
- The proposed works will be done at the expense of the owner and to City’s standard including provision for proper drainage; and
- The applicant is prepared to sign a consent letter stating that should a LAS program occur in the area fronting his/her frontage he/she is still required to pay the portion of the Local Area Services Levy unless the works and services installed preclude the need for LAS improvements.

### **NEXT STEPS**

- Consult with Queensborough Community;
- Report back to Council on community feedback with recommendations;
- Prepare written policies and necessary bylaw amendments; and
- Provide public information including on City’s website.

### **FINANCIAL IMPACTS**

As discussed in the preceding sections, the implementation of streetscape improvements in Queensborough would be funded by development under subdivision/ building permit applications, Local Service Area (LAS) initiatives or by individual owners desiring to enclose their frontage ditch. The City has in the past provided financial assistance in the order of 50% for LAS initiatives. The cost of the streetscape improvements is site-specific and to be determined once the implementation strategy and street standards are accepted.

### **OPTIONS**

1. Receive the draft implementation approach for ditch enclosure and urban streetscape in Queensborough;
2. Direct staff to consult with the Queensborough Community with respect to the proposed streetscape improvement scenarios contained within this report;
3. Direct staff to report back on community feedback and to recommend implementation strategies for moving forward including necessary bylaw amendments to incorporate modified urban streetscape standards for local streets in the Queensborough area;
4. Provide staff with other direction.

Staff recommends options 1, 2 and 3.

### **INTERDEPARTMENTAL LIASION**

Engineering Department and Development Services Department have collaborated in developing this report.

### **CONCLUSION**

Queensborough is transforming to an urban community and residents have expressed a desire for urban streetscape including ditch enclosure. The City has also experienced incidents of unauthorized culvert extensions and ditch modifications which impede drainage and pose other safety issues. A technical review conducted indicates that many side streets can be upgraded to urban streetscape standard with properly designed services. The urban streetscape can also be implemented incrementally either through infill subdivision, building permit application, a Local Area Service Program or upon a request by individual owner which is street specific.

### **ATTACHMENTS**

Attachment 1 - Unauthorized Culvert Extensions, Ditch Covers,..Etc.

Attachment 2 - Urban Streetscape Cross-Sections

Attachment 3 - Future Subdivision/Building Permit Potential Analysis Summary & Area Maps



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Binega Markos, BSc, A.Sc.T.  
Engineering Technologist



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Eugene Wat, P.Eng. PTOE  
Manager of Infrastructure Planning

Approved for Presentation to Council



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For  
Jim Lowrie, Eng.L, MBA  
Director of Engineering Services

Original Copy Signed

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Lisa Spitale  
Chief Administrative Officer



**Attachment 1**  
**Unauthorized Culvert**  
**Extensions, Ditch Covers,..Etc.**



## Existing Unauthorized Culvert Extensions, Ditch Covers,..Etc.



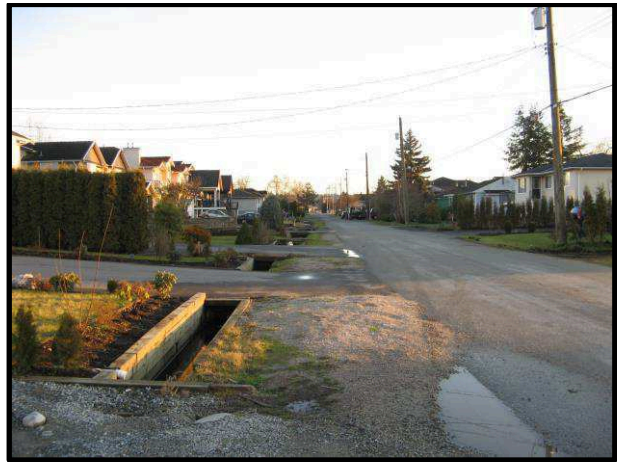
Existing unsafe gap between two driveway culverts



Existing unauthorized D/W culvert extensions



Existing unsafe pedestrian crossing ditch cover



Existing non-standard wooden ditch walls



Existing non-standard wood cribbing



Existing unsightly gap b/n two culverts





Existing non-standard wroughten wood lining ditch



Existing unsafe pedestrian crossing ditch cover



Existing unsafe plywood ditch cover



Existing unsafe gap b/n two D/W culverts



Existing unauthorized D/W crossing extension



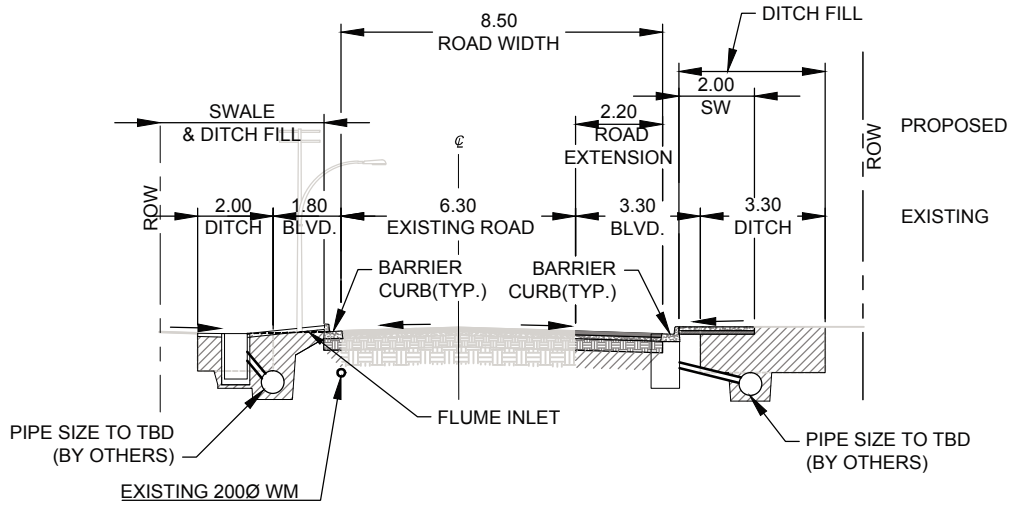
Unsafe gap b/n two immediate D/W crossings

*Attachment 2*  
**Urban Streetscape Cross-Sections**

This Drawing Is For The Use Of The Client And Project Indicated  
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# JOHNSTON ST.

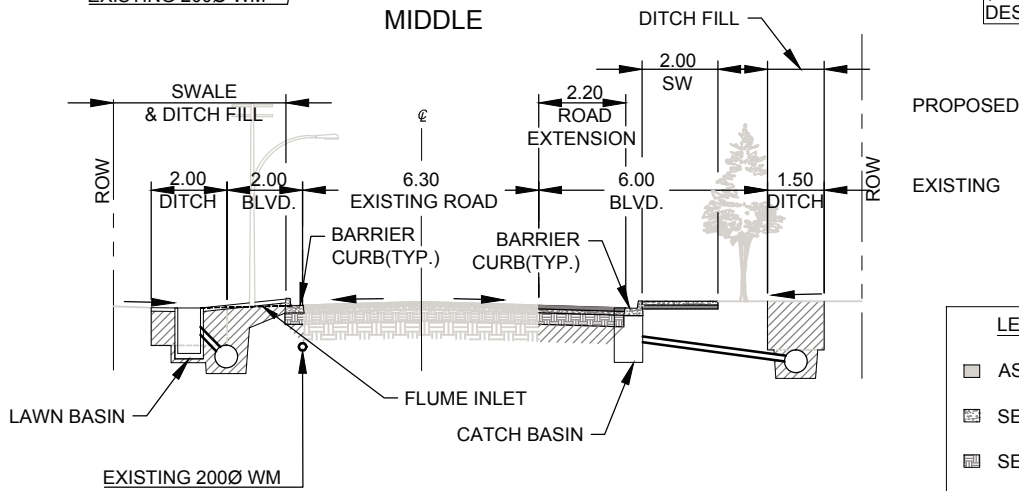
NORTH



**NOTE:**

- 1) AVAILABLE PARKING HAS BEEN PROVIDED ON THE EAST SIDE OF THE ROAD.
- 2) SWALE HAS A MIN. SLOPE OF 2% AND A MAX. SLOPE OF 6%.
- 3) TREE PROTECTION NEEDED (SHOULD BE INCLUDED IN DETAILED DESIGN STAGE).

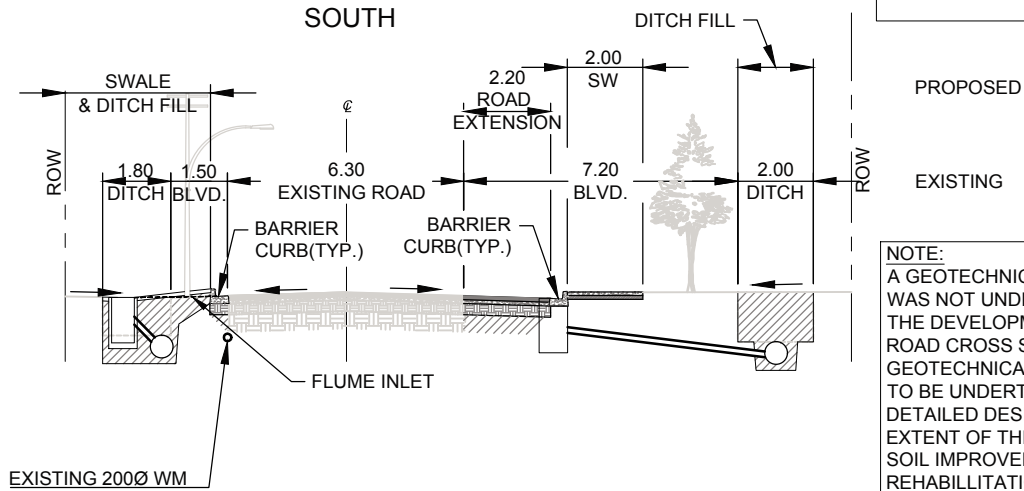
MIDDLE



**LEGEND:**

- ASPHALT
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- ▩ SELECT GRANULAR SUB-BASE
- ▧ LIGHT-WEIGHT FILL

SOUTH

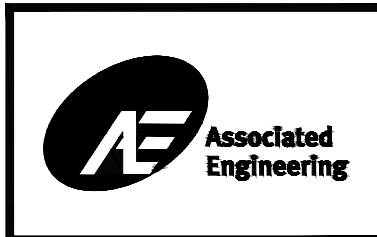


**NOTE:**

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DATE: 2013-08-21, Ryan Bowley

PROJECT No. 20132350  
DATE: August 2013  
APPROVED: D.H.  
SCALE: 1:200  
DWG. No. 1



**CITY OF NEW WESTMINSTER**  
QUEENSBOROUGH STREETScape  
CONFIGURATIONS - REVISION 0.A

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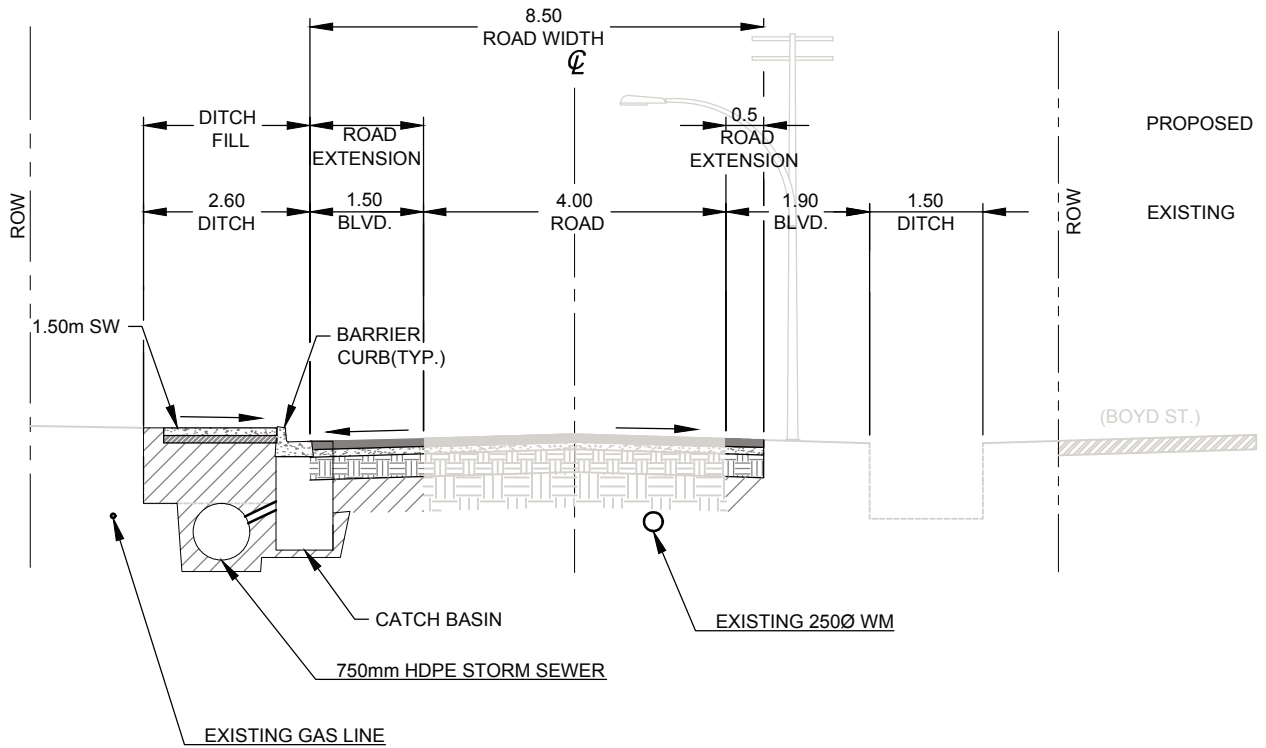
CROSS SECTION - JOHNSTON STREET







This Drawing Is For The Use Of The Client And Project Indicated  
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**NOTE:**  
 1) AVAILABLE PARKING HAS BEEN PROVIDED ON THE SOUTH SIDE OF THE ROAD.

# BOYD ST.



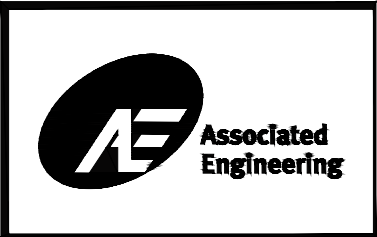
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-  SELECT GRANULAR SUB-BASE
-  LIGHT-WEIGHT FILL

**NOTE:**  
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**CITY OF NEW WESTMINSTER**  
 QUEENSBOROUGH STREETScape  
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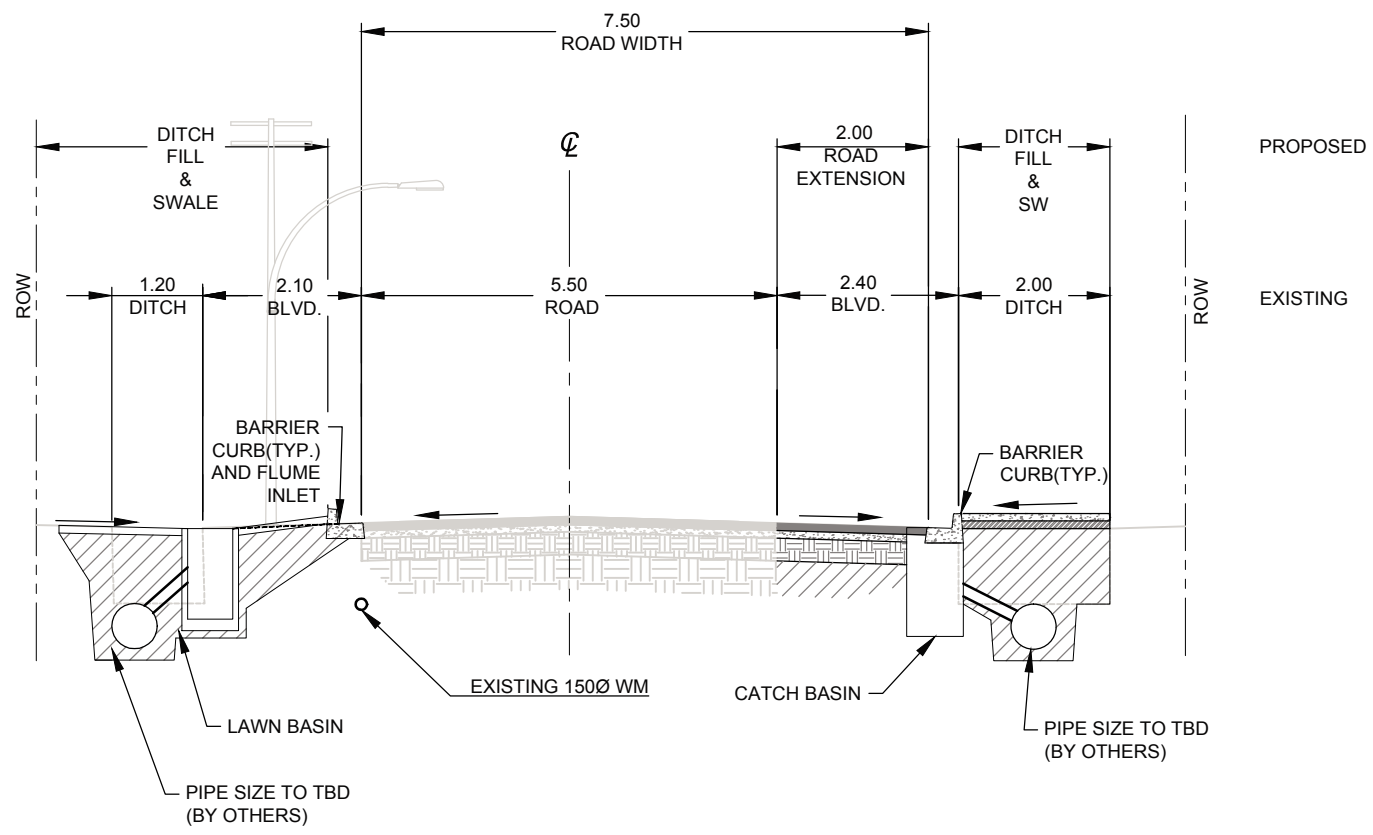
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CROSS SECTION - BOYD STREET

This Drawing Is For The Use Of The Client And Project Indicated  
 No Representations Of Any Kind Are Made To Other Parties

**NOTE:**  
 1) AVAILABLE PARKING HAS BEEN PROVIDED ON THE EAST SIDE OF THE ROAD.  
 2) SWALE HAS A MIN. SLOPE OF 2% AND A MAX. SLOPE OF 6%.

# FENTON ST. NORTH



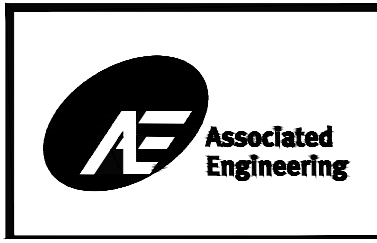
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**NOTE:**  
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**CITY OF NEW WESTMINSTER**  
 QUEENSBOROUGH STREETScape  
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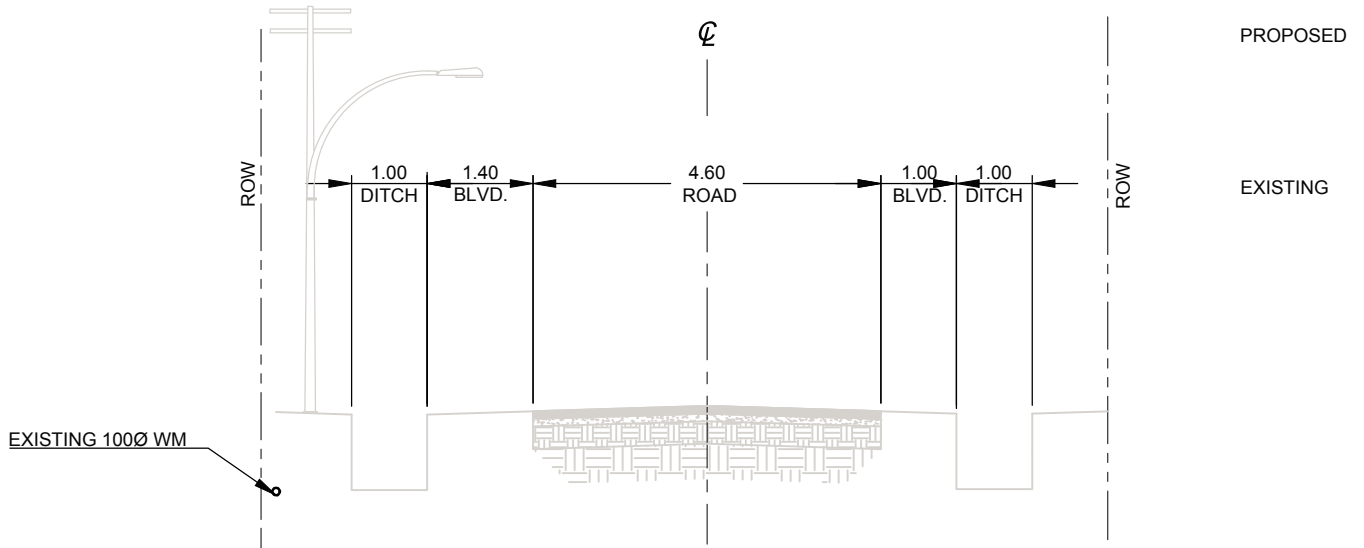
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CROSS SECTION - FENTON STREET NORTH

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NOTE:  
 1) NO ADDITIONAL PARKING  
 HAS BEEN PROVIDED.

# FENTON ST. SOUTH



NOTE: KEEP EXISTING CONDITIONS

**LEGEND:**

-  ASPHALT
-  SELECT GRANULAR BASE COURSE
-  LIGHT WEIGHT FILL
-  RED VISCOLAR BASALT

**NOTE:**

A GEOTECHNICAL INVESTIGATION WAS NOT UNDERTAKEN AS PART OF THE DEVELOPMENT OF THE TYPICAL ROAD CROSS SECTION. A GEOTECHNICAL INVESTIGATION HAS TO BE UNDERTAKEN DURING DETAILED DESIGN TO CONFIRM THE EXTENT OF THE REQUIRED SOIL IMPROVEMENTS AND PAVEMENT REHABILITATION.

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PROJECT No. 20132350  
 DATE: August 2013  
 APPROVED: D.H.  
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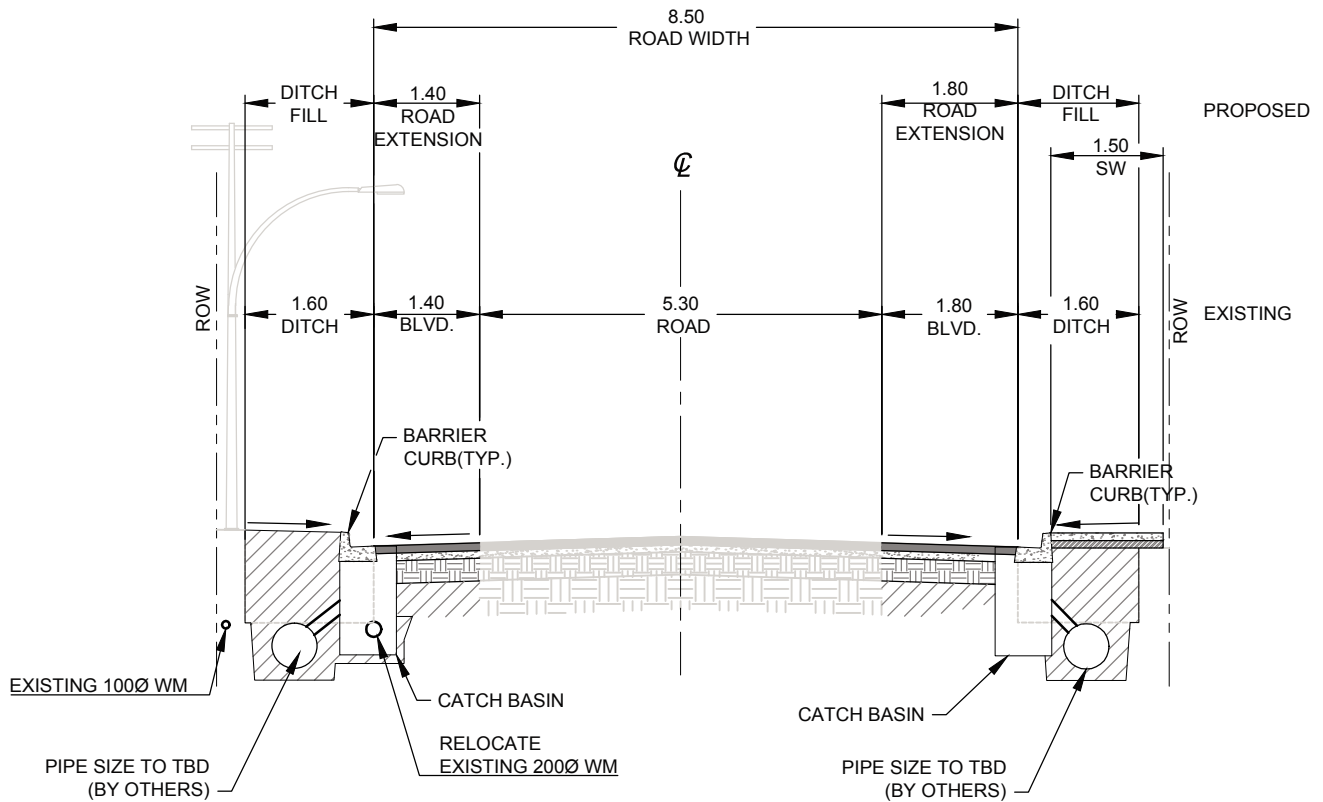
CITY OF NEW WESTMINSTER  
 QUEENSBOROUGH STREETScape  
 CONFIGURATIONS - REVISION 0.A

CROSS SECTION - FENTON STREET SOUTH





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**NOTE:**  
 1) AVAILABLE PARKING HAS BEEN PROVIDED ON BOTH SIDES OF THE ROAD.

# PEMBINA ST.



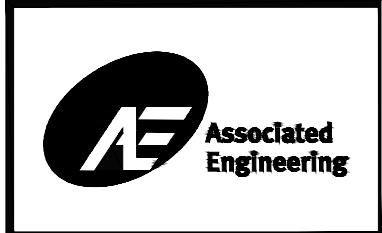
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-  SELECT GRANULAR SUB-BASE
-  LIGHT-WEIGHT FILL

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PROJECT No. 20132350  
 DATE: August 2013  
 APPROVED: D.H.  
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 DWG. No. 5



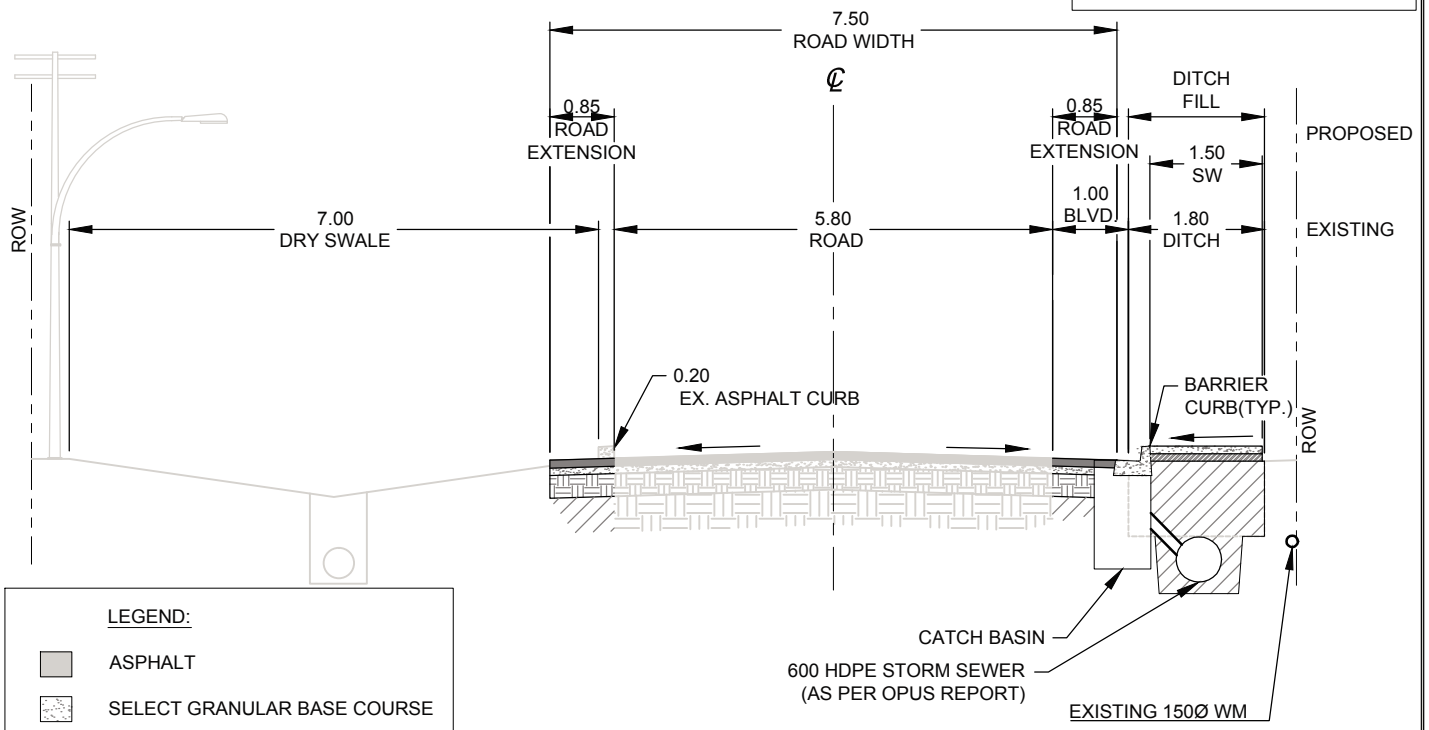
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 QUEENSBOROUGH STREETScape  
 CONFIGURATIONS - REVISION 0.A  
 CROSS SECTION - PEMBINA STREET

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# BOYNE ST. NORTH

NORTH

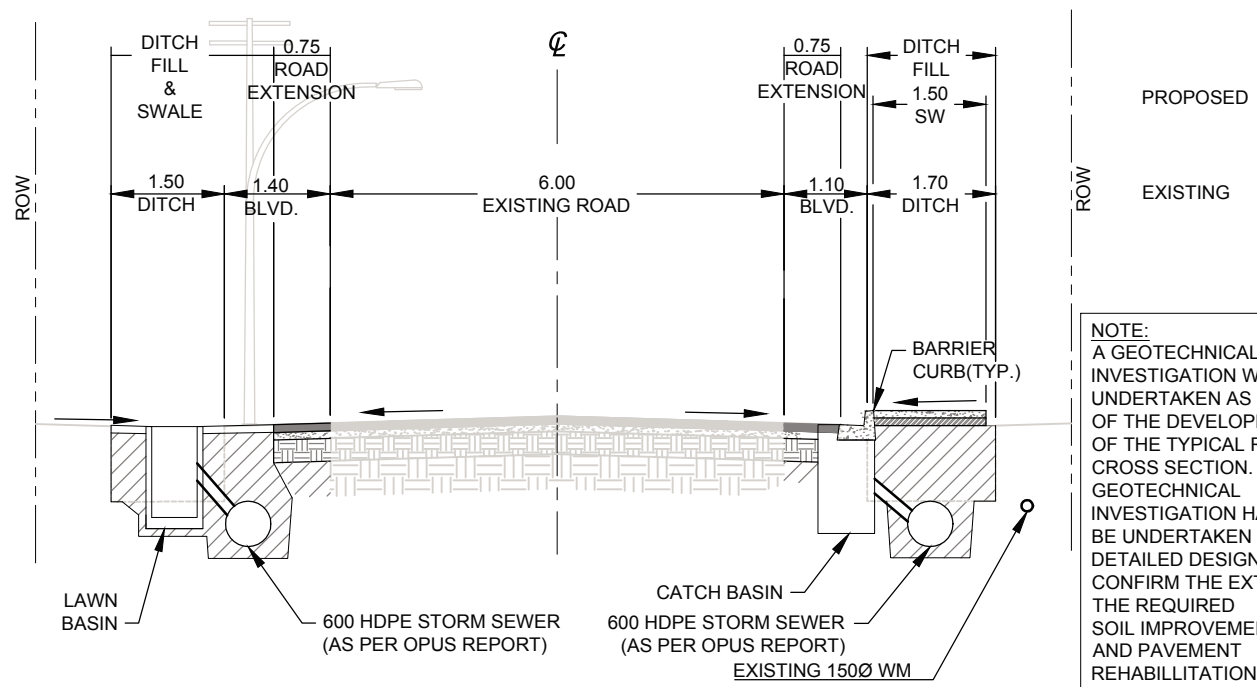
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2) SWALE HAS A MIN. SLOPE OF 2% AND A MAX. SLOPE OF 6%.



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- SELECT GRANULAR SUB-BASE
- LIGHT-WEIGHT FILL

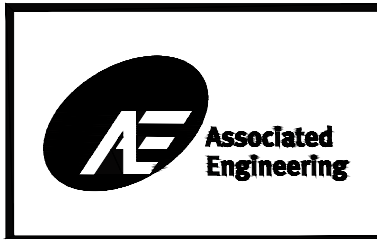
AVERAGE WIDTH  
MIDDLE & SOUTH



**NOTE:**  
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DATE: 2013-08-21, Ryan Bowley

PROJECT No. 20132350  
DATE: August 2013  
APPROVED: D.H.  
SCALE: 1:100  
DWG. No. 6



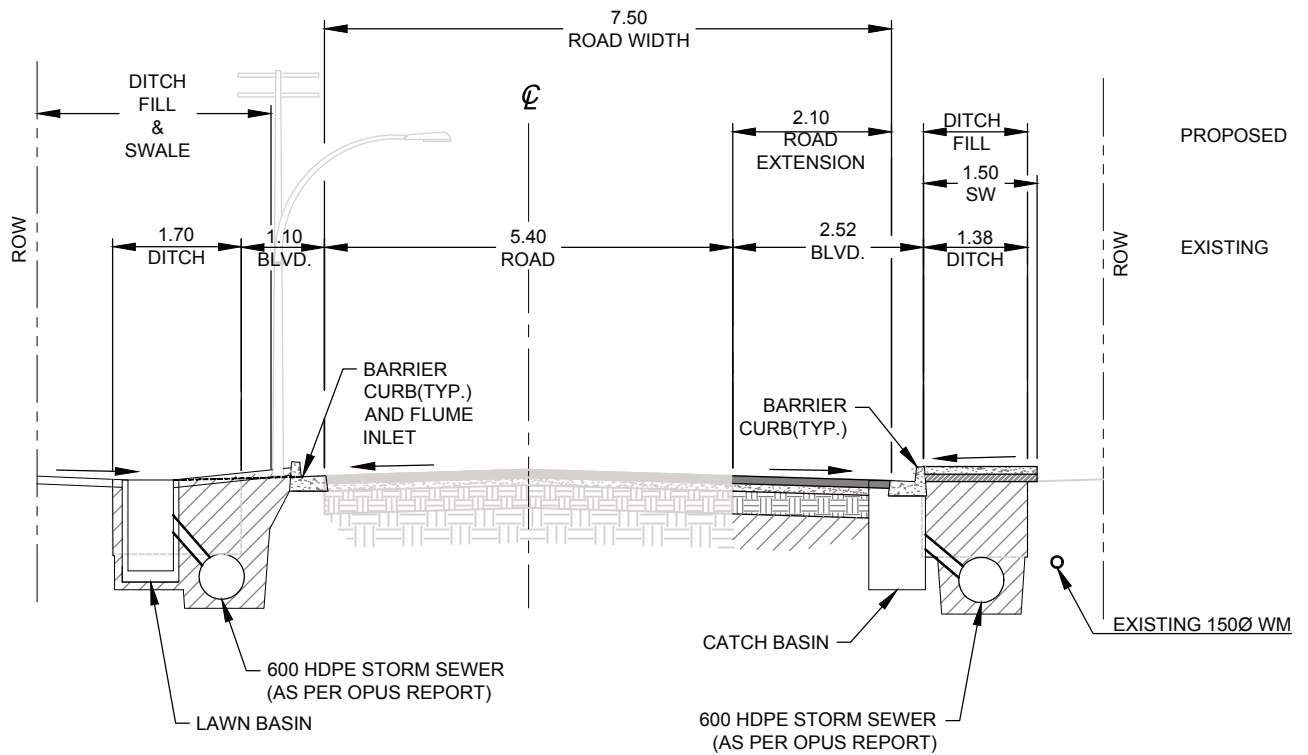
CITY OF NEW WESTMINSTER  
QUEENSBOROUGH STREETScape  
CONFIGURATIONS - REVISION 0.A  
CROSS SECTION - BOYNE STREET NORTH







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# BOYNE ST. SOUTH



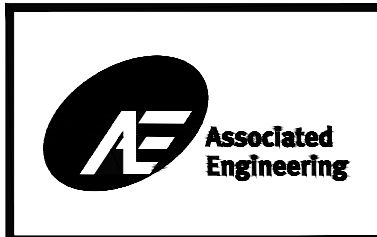
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-  LIGHT-WEIGHT FILL

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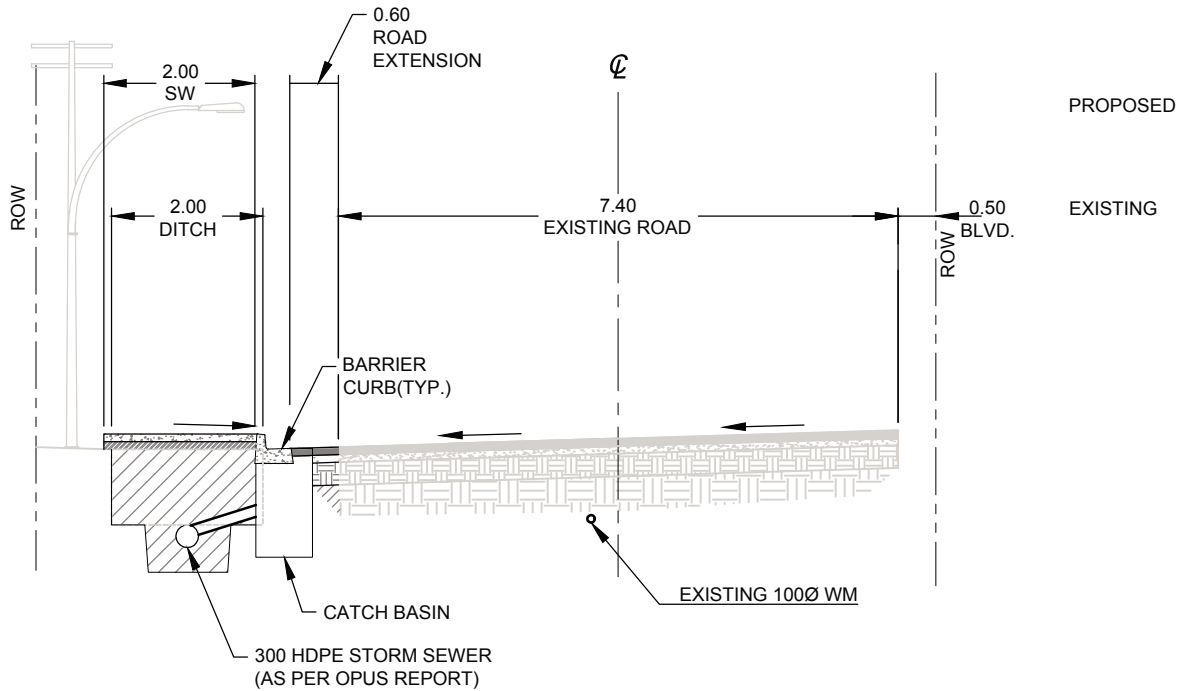


CITY OF NEW WESTMINSTER  
 QUEENSBOROUGH STREETScape  
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# WOOD ST. SOUTH



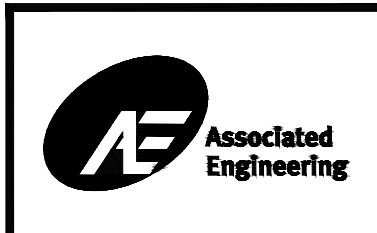
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 SCALE: 1:100  
 DWG. No. 8



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 QUEENSBOROUGH STREETScape  
 CONFIGURATIONS - REVISION 0.A

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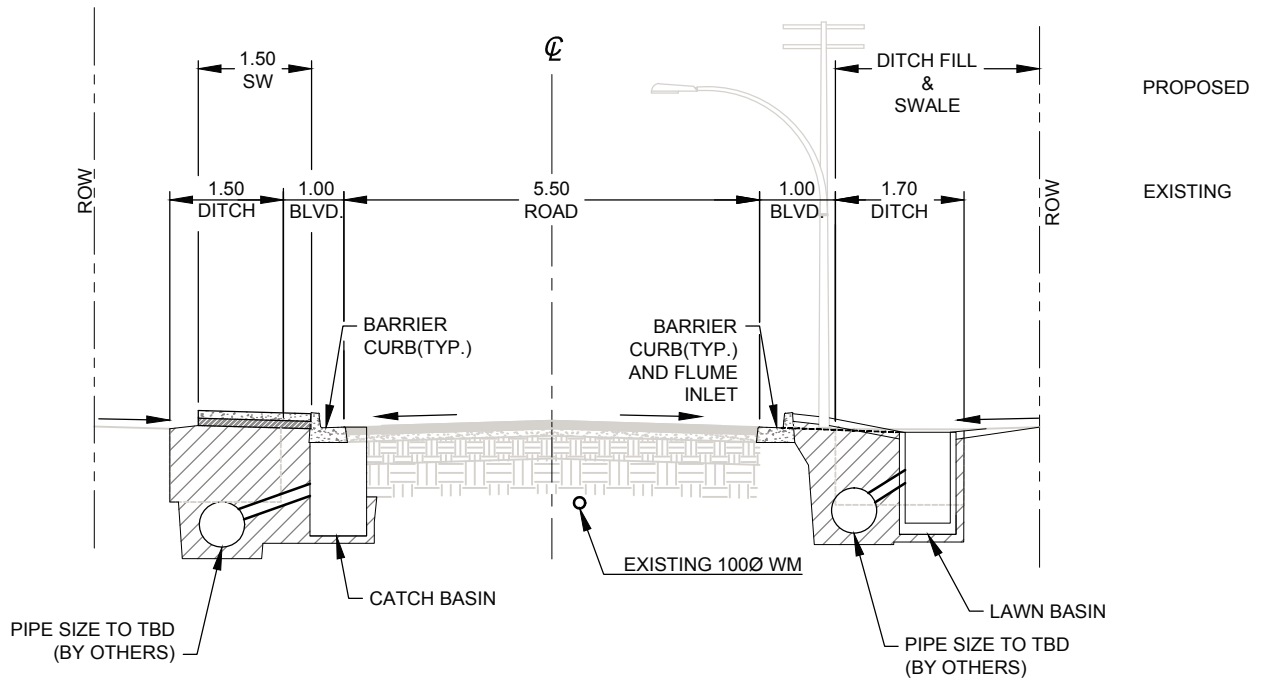
CROSS SECTION - WOOD STREET

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**NOTE:**  
 1) NO ADDITIONAL PARKING AREA HAS BEEN PROVIDED.  
 2) SWALE HAS A MIN. SLOPE OF 2% AND A MAX. SLOPE OF 6%.

# CAMPBELL ST. SOUTH

MIDDLE



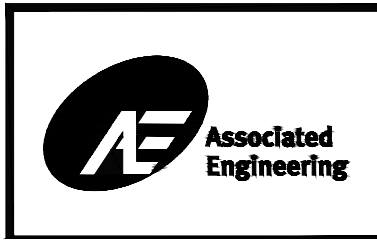
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 SCALE: 1:100  
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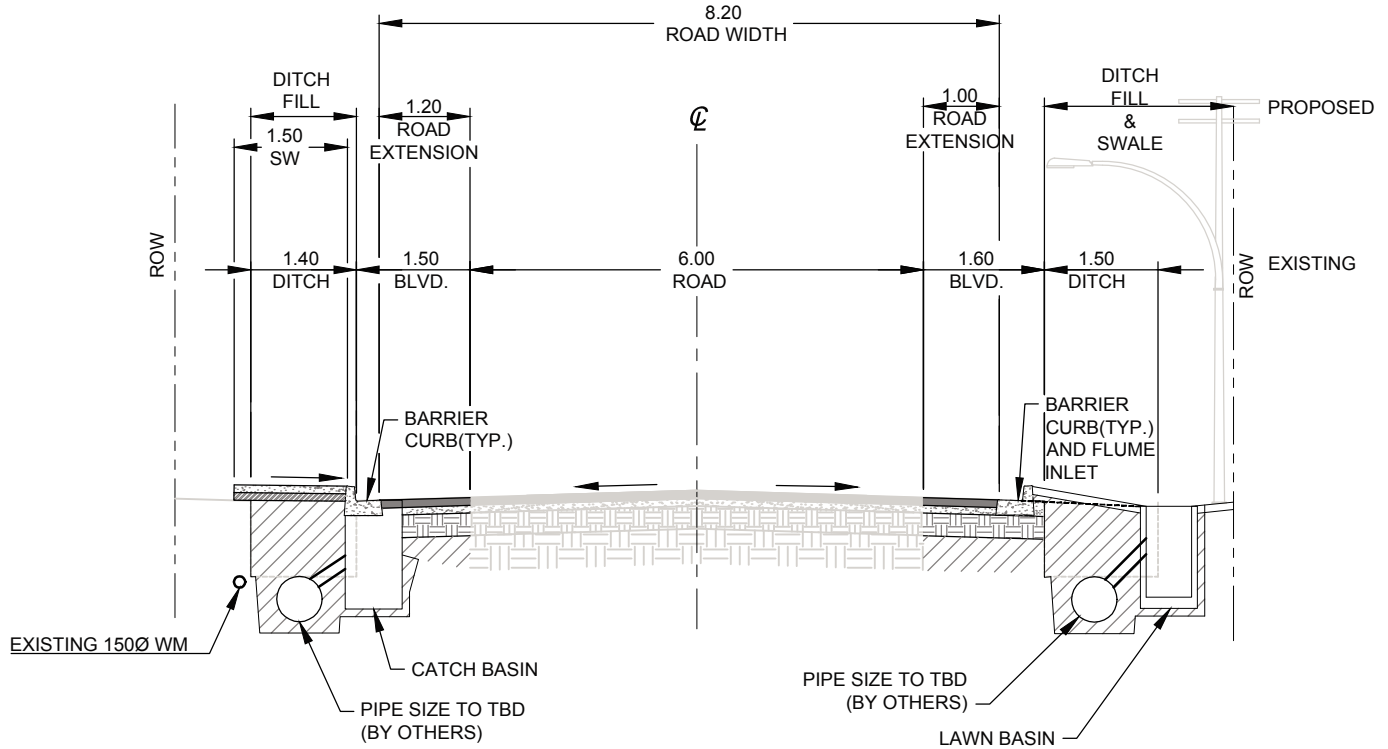
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CROSS SECTION - CAMPBELL STREET SOUTH

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# LAWRENCE ST. SOUTH

**NOTE:**  
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2) SWALE HAS A MIN. SLOPE OF 2% AND A MAX. SLOPE OF 6%.



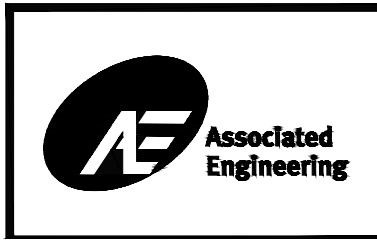
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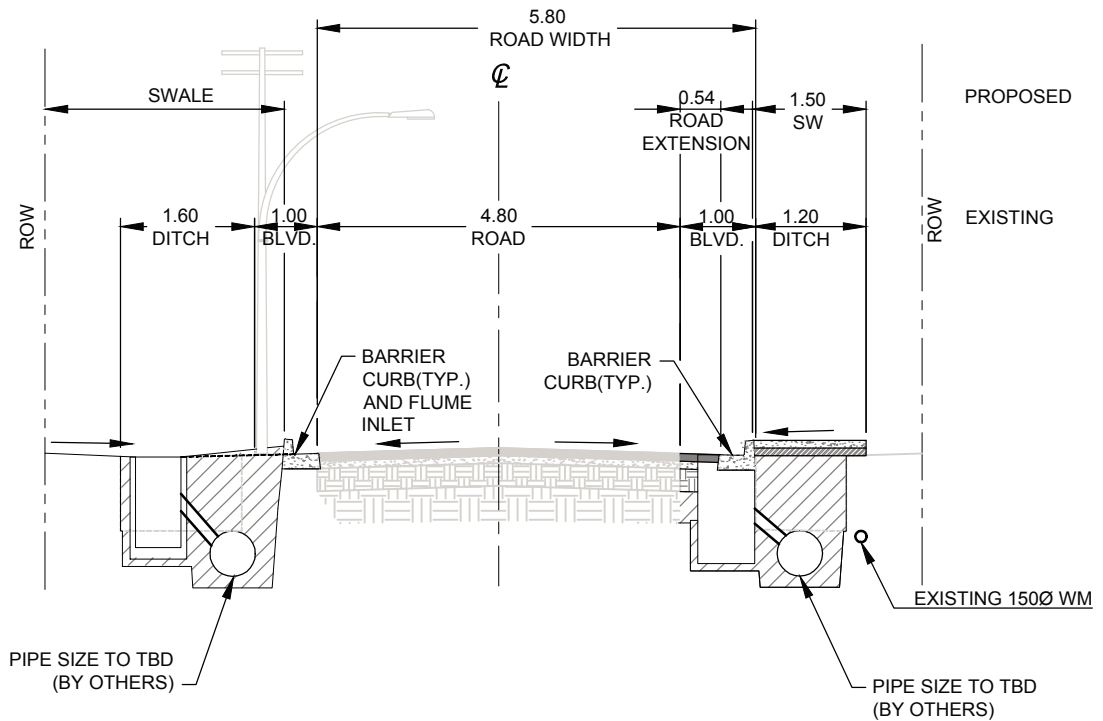


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QUEENSBOROUGH STREETScape  
CONFIGURATIONS - REVISION 0.A  
CROSS SECTION - LAWRENCE STREET SOUTH

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# LAWRENCE ST. NORTH



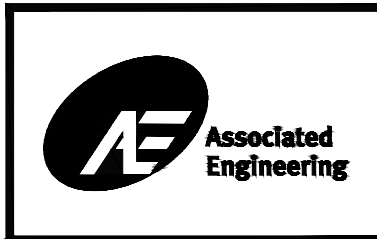
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 SCALE: 1:100  
 DWG. No. 11



**CITY OF NEW WESTMINSTER**  
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CROSS SECTION - LAWRENCE STREET NORTH



**Attachment 3**  
**Future Subdivision/Building Permit Potential Analysis**  
**Summary & Area Maps**

## **Future Subdivision and Building Permit Potential Analysis Summary**

### **Notes:**

1. For the purposes of future potential analysis and according to current zoning bylaw a Lot with an area of 8000 Square foot and above is assumed to have a potential for subdivision application while an existing house that was built before 1975 (i.e. 40 or more years old) is deemed to have potential for demolition and building permit application.
2. The proposed urban streetscapes (See Attachment A) were established as follows:
  - To provide a minimum pavement width of 7.5 m and a maximum 8.5 m.
  - All road widths should accommodate an area for parking.
  - Power poles will remain in place and will not be relocated.
  - Ditches will be filled with light weight fill material where applicable.
  - Sidewalks will be added where the cross section width permits.

### **Johnston Street**

- About 50% the existing lots on Johnston Street are both subdividable and contain houses that are more than 40 years old. This also means there is a significant subdivision and building permit application potential. This is expected to create an opportune time for future development and implementation of the proposed urban streetscape.

### **Fenton Street (North and South)**

- Fenton Street north is about 400 metre long and there are 44 properties fronting it on both sides.
- One-quarter of Fenton Street north fronts City owned vacant lots.
- There is a significant potential to implement the proposed urban streetscape under either subdivision or building permit applications.
- Fenton Street south is proposed to remain “as-is” i.e. non-urban streetscape standard. This road has undergone recent repaving and ditch and culvert improvements. The road is in very good condition.

### **Pembina Street (North and South)**

- Pembina Street north is about 400 metre long and there are 44 properties fronting it on both sides.
- On the absence of future subdivision or building permit applications potential on north side of Pembina Street, it's assumed that the urban streetscape can only be implemented either under LASP or at a request by an individual owner(s).

- Pembina Street south is about 300 metre long and there are 34 properties fronting it on both sides.
- There existing a significant potential to implement the proposed urban streetscape under future building permit or subdivision applications.

### **Boyne Street (North and South)**

- Boyne Street north is about 400 metre long and there are 44 properties fronting it on both sides and one of the properties is a Sikh Temple.
- About one-fourth of Boyne Street north has been constructed to an urban streetscape under a Local Area Service Program (LASP) where the City has contributed 50% of the total construction cost.
- Since about 50% of the existing houses are more than 40 years old the remainder three-fourth of the urban streetscape can be realized under future building permit applications.

### **Wood Street (North and South)**

- Wood Street north is about 400 metre long and there are 27 properties fronting it on both sides.
- About two-third of Wood Street north has been constructed to an urban streetscape and the remainder portion can be reconstructed to an urban streetscape standard at either subdivision or building permit applications.
- Wood Street south is about 300 metre long and there are 35 small size properties fronting it on both sides.
- It appears that the future subdivision potential on Wood Street south is very slim, however, since 70% all the existing houses have an average age of 80 years, there is a significant potential for building permit applications under which the proposed urban streetscape can be implemented.

### **McGillivray Place**

- This street was constructed to an urban streetscape standard on both sides of the street back in 1993.

### **Campbell Street**

- Campbell Street is about 300 metre long and there are 27 properties fronting it on both sides.
- This street has the highest potential for the implementation of the proposed urban streetscape under both subdivision and building permit applications.











- The City has already received development application for almost the entire frontage on west side of Campbell Street.

### **Lawrence Street (North and South)**

- Lawrence Street North is about 150 metre long and there are 17 properties fronting it on both sides.
- There is a potential to do half of the frontage improvements work under future subdivision applications.
- Lawrence Street North is also about 150 metre long and there are 14 properties fronting it on both sides and one of the properties is a church.
- The ditch fronting the church is already enclosed.
- Similarly there is a potential to do half of the frontage improvements work either under future subdivision or building permit applications.

# FUTURE SUBDIVISION/BUILDING PERMIT POTENTIAL ANALYSIS, PG. 1

### LEGEND

-  LOT WITH FUTURE SUBDIVISION (>=8000 SQ.F) & BUILDING PERMIT APPLICATION POTENTIAL (FOR HOUSES BUILT BEFORE 1975 (>=40 YEARS OLD))
-  LOT WITH FUTURE BUILDING PERMIT APPLICATION POTENTIAL (FOR HOUSES BUILT BEFORE 1975, >=40 YEARS OLD) BUT NOT SUBDIVIDABLE
-  LOT WITH AN EXISTING UTILITIES CORRIDOR
-  LOT WITH A CURRENT DEVELOPMENT OR SUBDIVISION APPLICATION
-  EX/PRO CURB & GUTTER & SIDEWALK
-  EX CURB & GUTTER WITH GRASSED BOULEVARD
-  EX CASH-IN-LIEU (A PORTION ONLY)
-  LOT WITH AN EXISTING HOUSE BUILT AFTER 1975, <=40 YEARS OLD & WITH AREA <=8000 SQ.F (I.E. WITH LESS POTENTIAL EITHER FOR SUBDIVISION OR B.P. APPLICATION)

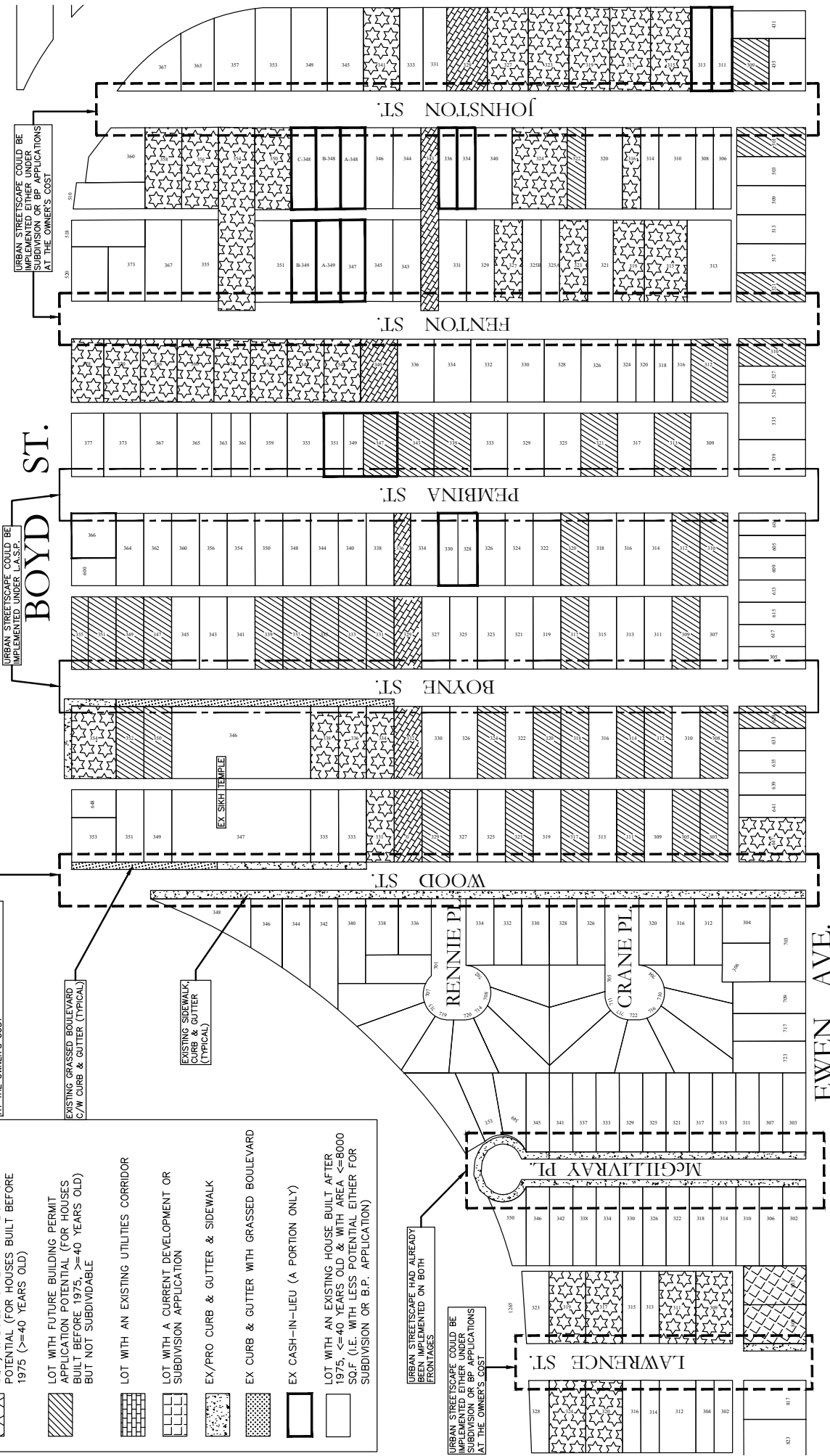
THREE-QUARTER OF WOOD ST URBAN STREETScape HAD ALREADY BEEN IMPLEMENTED EITHER UNDER SUBDIVISION OR B.P. APPLICATIONS AT THE OWNER'S COST

EXISTING GRASSED BOULEVARD C/W CURB & GUTTER (TYPICAL)

EXISTING SIDEWALK CURB & GUTTER (TYPICAL)









URBAN STREETScape HAD ALREADY BEEN IMPLEMENTED ON BOTH FRONTAGES

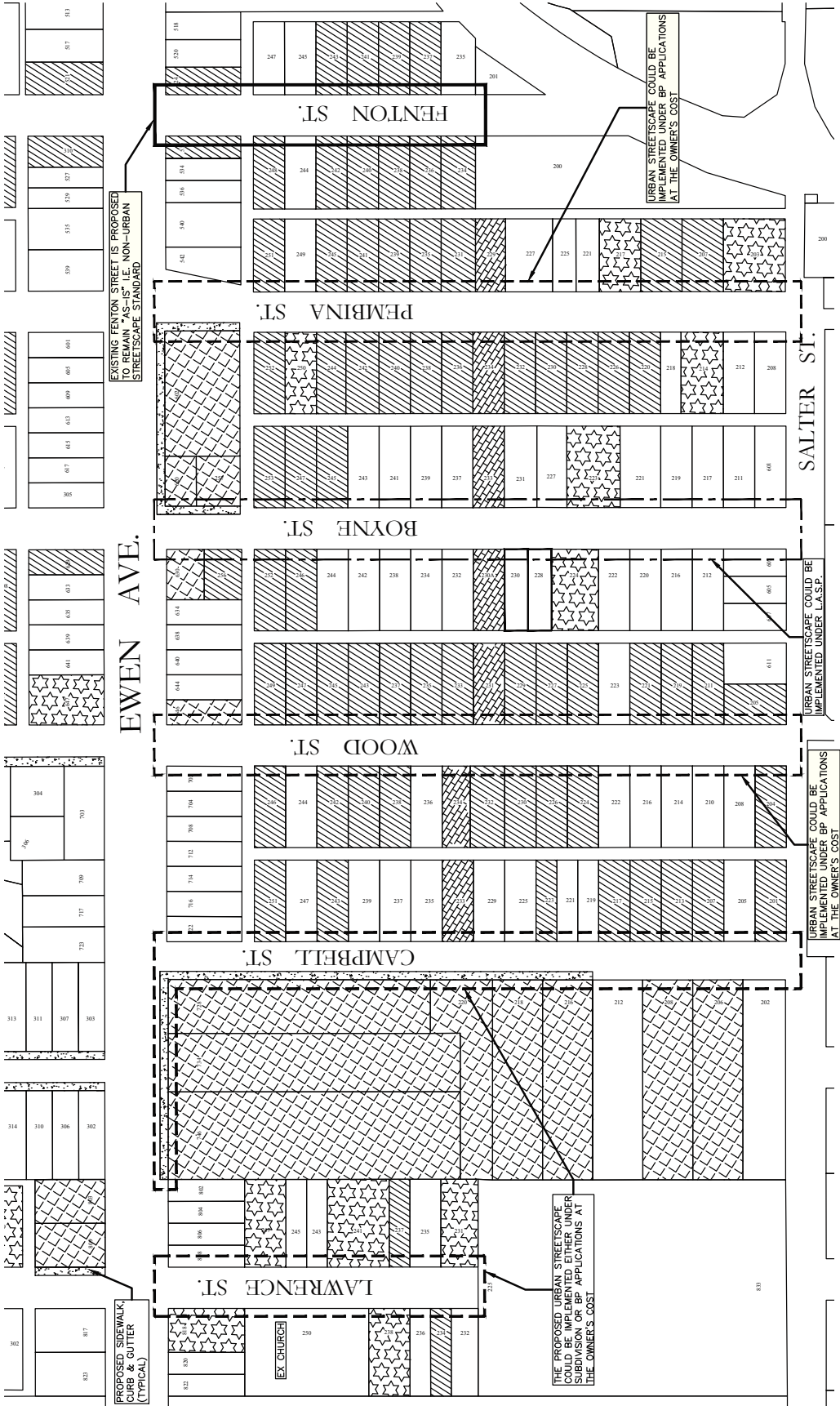
URBAN STREETScape COULD BE IMPLEMENTED EITHER UNDER SUBDIVISION OR B.P. APPLICATIONS AT THE OWNER'S COST



# FUTURE SUBDIVISION/BUILDING PERMIT POTENTIAL ANALYSIS, PG.2

## LEGEND

-  LOT WITH FUTURE SUBDIVISION (AREA >=8000 SQ.F) & BUILDING PERMIT APPLICATION POTENTIAL (FOR HOUSES BUILT BEFORE 1975, >=40 YEARS OLD)
-  LOT WITH FUTURE BUILDING PERMIT APPLICATION POTENTIAL (HOUSES BUILT BEFORE 1975, >=40 YEARS OLD) BUT NOT SUBDIVIDABLE
-  LOT WITH AN EXISTING HOUSE BUILT AFTER 1975, <=40 YEARS OLD & WITH AREA <=8000 SQ.F (I.E. WITH LESS POTENTIAL EITHER FOR SUBDIVISION OR B.P. APPLICATION)
-  EX/PRO CURB & GUTTER & SIDEWALK
-  LOT WITH AN EXISTING UTILITIES CORRIDOR
-  EX CURB & GUTTER WITH GRASSED BOULEVARD
-  LOT WITH A CURRENT DEVELOPMENT/SUBDIVISION APPLICATION
-  EX CASH-IN-LIEU (A PORTION ONLY)



## Attachment 2

### **Queensborough Streetscape Plan Info Session Boards**



## BACKGROUND

Queensborough residents have expressed a desire to enhance their streetscape primarily by:

- Eliminating open ditches (to address standing water concerns)
- Organizing on-street parking
- Providing sidewalks

Current Issues:

- Drainage problems due to misaligned and incorrectly sized culverts and ditch encroachment
- Unauthorized culvert extensions and ditch covers
- Impediments to maintenance
- Hazardous gaps between two driveways
- Inconsistent streetscapes
- Hazardous pedestrian ditch crossings



Existing non-standard rotten wood retaining wall.



Existing hazardous pedestrian ditch crossing.



Existing hazardous plywood ditch cover.



Existing hazardous gap between two driveway culverts.



## WHAT ARE THE CHALLENGES?

1. Drainage:
  - Flat land and ditch grades
  - High water table
  - Soft soils and settlements
  - Misaligned and under sized culverts
2. Costs of infilling ditches

## DITCH ENCLOSURE SUMMARY

- The existing ditches along many local roads can technically be enclosed and replaced with storm sewers.
- Major ditches and canals can NOT be enclosed.

### Area of Interest



Lines indicate streets with existing open ditches that can potentially be enclosed.

## Status of Streetscape and Ditch Enclosures in Queensborough

### West Area, Mid-West Area and East Area

The implementation of ditch enclosure and urban street improvements in the West Area, Mid-West Area and East Area are being undertaken through development process.



## PROPOSED URBAN STREETScape IMPLEMENTATION OPTIONS

### 1. Local Area Service Program (LASP)

- Capital Cost sharing between benefiting landowners and the City.\*
- This requires a certified petition supported by at least 50% of the owners of properties representing 50% of the assessed value of land and improvements.
- A bylaw and local area service tax would be established where property owners can either pay their assessment in one payment or amortize the payments over a 20 year period.
- For developments involving the entire block or a substantial portion of the block, the full urban streetscape would be required.
- For a LASP initiative, the City will apply the streetscape standard for the subject street and work with the proponents to petition the benefiting area and process the request to Council.

#### Advantages of LASP:

- Consistent streetscapes (opportunity to do the entire block)
- Cost saving due to economy of scale and constructability
- Cost-sharing with the City\*
- Different payment options such as amortization or one payment
- Less construction inconvenience to residents
- Mitigates future settlement problems



*\*Subject to Council's approval of LASP*



## PROPOSED URBAN STREETScape IMPLEMENTATION OPTIONS

### 2. Subdivision Development

- 100% at the cost to the Developer/Owner
- Suitable for street with development potential
- Three possible options of ditch enclosure including soil stabilization and urban streetscape for infill subdivision are:
  - i. Undertake full urban streetscape frontage works at the time of subdivision.
  - ii. Phasing the work by installing only underground works (drainage system, road backfill) at time of subdivision with cash-in-lieu for the remaining frontage services such as sidewalk, street lighting, etc. for future implementation.
  - iii. Collect cash-in-lieu for future implementation of all urban streetscape frontage works.

### 3. Building Permit Application

- 100% at the cost to the Developer/Owner.
- Legislation allows a city to require works and services on the portion of a highway immediately adjacent to the site being developed, up to the center line of the highway as a condition of the issuance of a Building Permit.
- For small infill developments including subdivision and building permits, ditch enclosure at minimum will be employed subject to engineering requirements, while cash-in-lieu will be collected for the remainder portion of the urban streetscape works and held in trust for future use towards LASP, or when the majority of lots have been developed.





## PROPOSED URBAN STREETScape IMPLEMENTATION OPTIONS

### 4. Request by Individual Property Owners (no building permit, subdivision or LASP initiative)

- 100% at the cost to the property owner

A recommended approach for incremental establishment of urban streetscape frontage is as follows:

Owners may apply to enclose existing ditches fronting their homes provided that:

- The proposed work is outside of ditches/canals identified as “major” under the City’s Drainage Master Plan;
- Soil stabilization and storm drainage are designed to City standards and constructed under the supervision of a geotechnical/civil engineer;
- Work may also include minor road widening and installation of curbing with a minimum pipe length of 40 to 50 meter with cleanout/manholes;
- The proposed works will be done at the expense of the owner; and
- The applicant is prepared to sign a consent letter stating that should a LAS program occurs in the area fronting his/her frontage he/she is still required to contribute to the portion of the Local Area Services Levy unless the works and services installed preclude the need for LASP improvements.

## PROGRESS TO DATE

- City of New Westminster staff met with representatives of the Queensborough community. (October 2012)
- Staff developed appropriate streetscape alternatives on a street by street basis for Mid-East Area. (August 2013)
- Staff presented report to Council proposed implementation options for ditch enclosure and urban streetscapes. (September 2015)
- Complete public consultation on the implementation strategy (December 8, 2015)

## ULTIMATE VISION



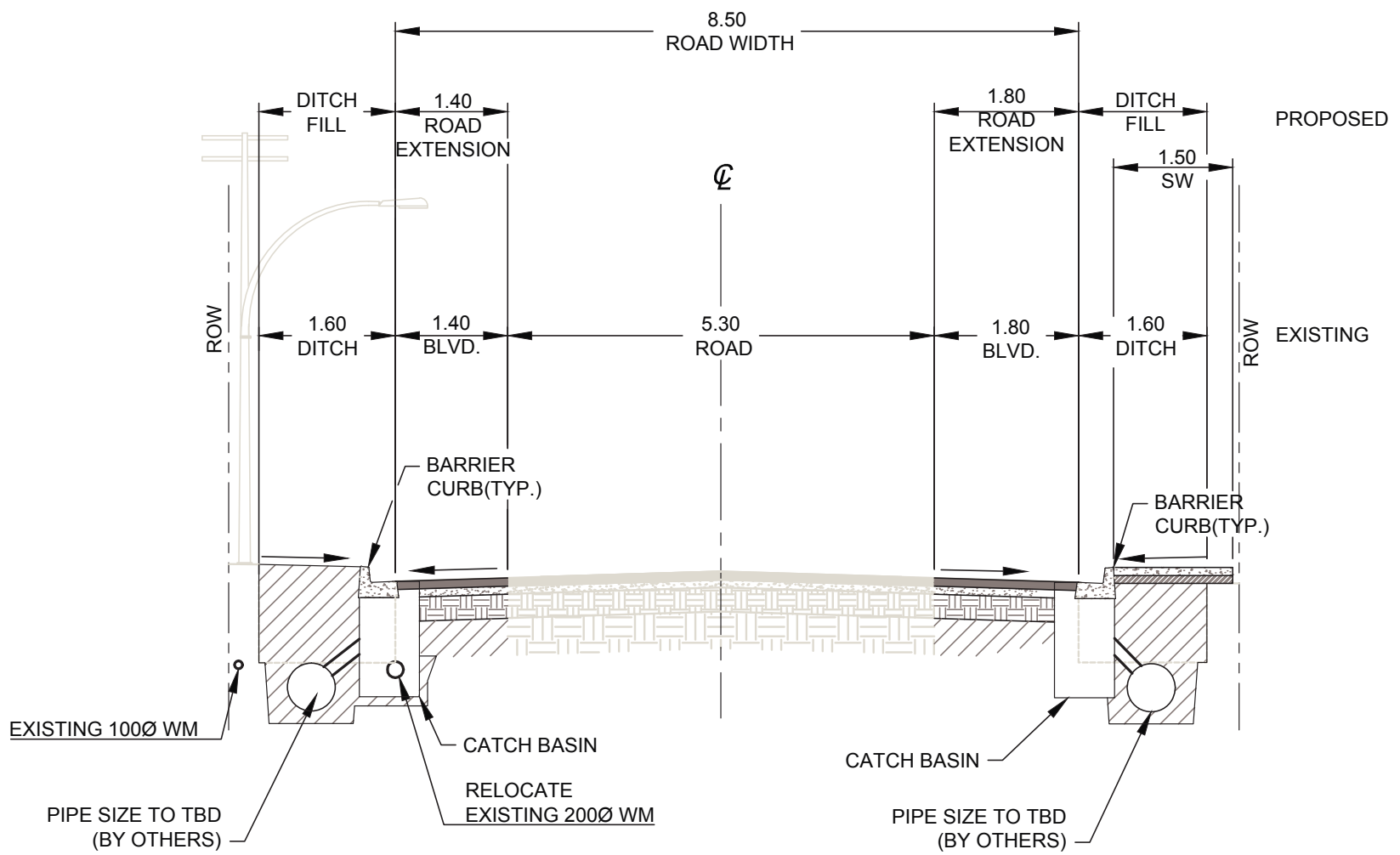
# Queensborough Urban Streetscape Plan

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DATE: 2013-08-21, Ryan Bowley

**NOTE:**  
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## PEMBINA ST.

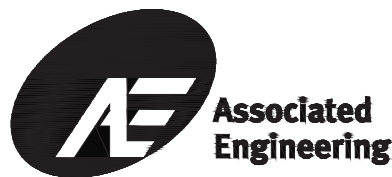


**LEGEND:**

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DWG. No. 5



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QUEENSBOROUGH STREETScape  
CONFIGURATIONS - REVISION 0.A

CROSS SECTION - PEMBINA STREET

# DRAFT