



ALEO ASSOCIATES INC.
CONSULTING ENGINEERS

FUNCTIONAL SERVICING REPORT
PROPOSED COMMERCIAL PLAZA DEVELOPMENT
LOCATED ON LAND SOUTH OF 1055 TALBOT ST.
ST. THOMAS, ON

PREPARED FOR:

ROCK DEVELOPMENTS INC.
19 AMY CROFT DRIVE
TECUMSEH, ON
N9K 1C7

PREPARED BY:

ALEO ASSOCIATES INC.
325 DEVONSHIRE ROAD, SUITE 500
WINDSOR, ONTARIO
N8Y 2L3



DATE: AUGUST 25, 2026

PROJECT No.: 8975

TABLE OF CONTENTS

1.0 INTRODUCTION1

2.0 WATER SERVICING1

3.0 SANITARY SERVICING2

4.0 STORM WATER SERVICING & STORMWATER MANAGEMENT2

5.0 CONCLUSION.....2

LIST OF APPENDICES

Appendix ‘A’ Supporting Information.....3

1.0 INTRODUCTION

Aleo Associates Inc. has been retained by ROCK Developments Inc. to prepare a functional servicing report for the proposed commercial plaza development located on the property immediately south of 1055 Talbot Street in St. Thomas, Ontario.

The site is bounded by First Avenue to the west, an existing commercial development to the north, south, and east. Refer to Appendix 'A' for the site location. The total property area is 27,790 m² (2.78 ha.).

The property is currently predominantly open land with one existing building which will be demolished to make way for re-development. The proposed development consists of four commercial buildings and associated parking lot. Refer to Appendix 'A' for the site plan drawing for additional details.

This report has been prepared to demonstrate how the proposed development will be serviced for water distribution, wastewater, and storm water drainage. The report is provided to the City of St. Thomas to assess the impact of this development on the existing infrastructure in reviewing the planning applications for which this report is prepared.

2.0 WATER SERVICING

A 350 mm diameter watermain is located along First Avenue in the south bound lane. There is an existing 150 mm watermain connection to this property which will be abandoned due to its location, size, and age. A new 250 mm fire service and a separate 200 mm domestic water service are proposed for the development.

The minimum required fire flow for the largest proposed building has been calculated in accordance with the Ontario Building Code (O.B.C.) as follows:

$$Q = K \times V \times Stotal$$

Where,

Q = Volume of water required (L)

V = Total building volume (m³)

K= Water Supply Coefficient (from O.B.C. tables)

Stotal = Total of spatial coefficient values from property line exposures on all sides

$$Q \text{ (Building 'A')} = 10 \times 31,920 \text{ m}^3 \times 1.4 = 446,880 \text{ L}$$

As the calculated fire flow volume (Q) is greater than 270,000 L, the minimum required fire flow rate in accordance with the O.B.C. is 9,000 L/min.

It is expected that the 350 mm municipal watermain has adequate flow and pressure to service the commercial development. A hydrant flow test will be conducted to confirm flow and pressure. This report shall be amended to incorporate the results.

3.0 SANITARY SERVICING

The subject property is tributary to an existing 250mm diameter private sanitary sewer located in a 3.0 m wide easement along the west property line. This private sewer flows south and discharges to an existing 450 mm municipal sanitary sewer on Talbot Street which flows to the existing 525 mm sanitary sewer on First Avenue.

The proposed development will consist of four commercial buildings. The peak sanitary sewage flow associated with the proposed development was calculated to be 2.51 L/s. See Appendix 'A' for the proposed peak sanitary sewage flow design sheet.

4.0 STORM WATER SERVICING & STORM WATER MANAGEMENT

The property is tributary to an existing 600 mm diameter storm sewer located in a 3.0 m wide easement along the west property line. This private storm sewer flows south and outfalls to the 1200 mm storm sewer on Talbot Street.

This existing 600 mm diameter storm sewer will be used to service the property for stormwater drainage through a new 600 mm diameter storm connection.

The allowable runoff coefficient of this property is $C=0.46$ in accordance with the Functional Servicing Report & Stormwater Management Report for the Re-Development of 1055 Talbot Street (Aleo Associates Inc., dated April 10, 2019). The pre-development (allowable) runoff rate was determined to be 291.8 L/s, based on a 5-year design storm, a 15-minute time of concentration, and a runoff coefficient of 0.46.

Quality control of the stormwater leaving the site will be required to meet MOE requirements for the removal of oil and 80% of total suspended solids, consistent with an Enhanced Level of Protection. This will be achieved using an oil and grit separator unit (OGS).

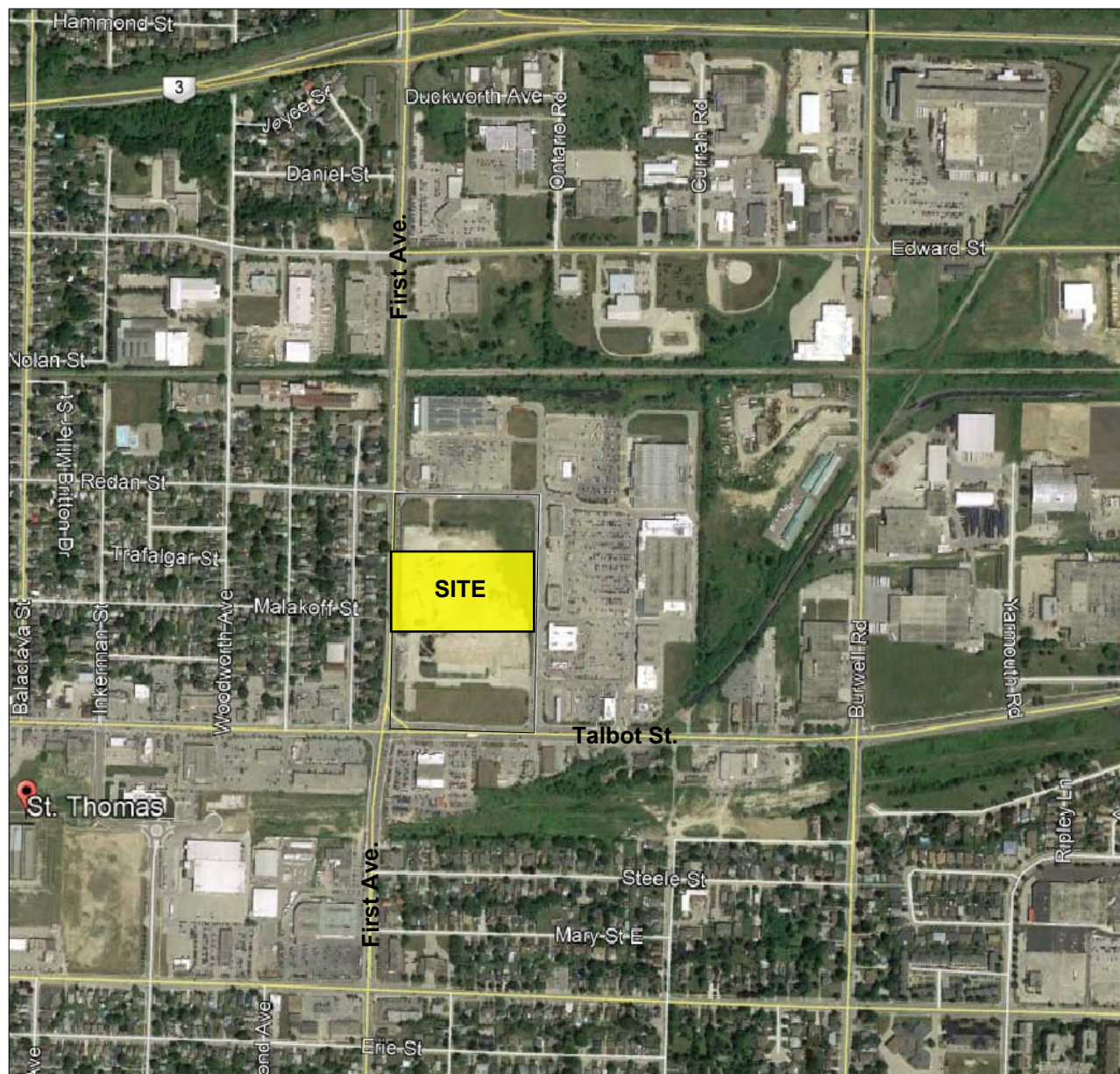
The stormwater management design shall be prepared in accordance with St. Thomas stormwater management design standards. A full stormwater management report will be submitted for City review and approval during the Site Plan Approval process.

5.0 CONCLUSION

This functional servicing report has established how the development of this site will be serviced with respect to water distribution, wastewater, and storm water drainage without negatively impacting the existing municipal infrastructure.

A summary of the conclusions of this report is as follows:

- The proposed development can be serviced by the existing municipal watermain system. An existing 150 mm water service will be abandoned and a new 250 mm firemain and 200 mm domestic water service are proposed. The municipal main is expected to have adequate flow and pressure to meet the building's combined water demand, however, hydrant flow tests will be conducted to confirm.
- An existing 250 mm private sanitary sewer is located in an easement on the west side of the property and will service the proposed commercial development through a new 200 mm sanitary service connection.
- Stormwater runoff from the site will drain to the existing 600 mm diameter private storm sewer along the west side of the property through a new 600 mm storm service connection. Stormwater will be restricted to the calculated allowable release rate of 291.8 L/s. Stormwater management design shall follow the latest City of St. Thomas stormwater management design standards and a full Stormwater Management report will be submitted for City review and approval during the Site Plan Approval process.
- Stormwater quality control of the stormwater leaving the site will be required to meet MOE requirements for removal of oil and 80% of total suspended solids (TSS), consistent with an Enhanced Level of Protection. This will be achieved through the implementation of an oil and grit separator unit (OGS).



ALEO ASSOCIATES INC.
CONSULTING ENGINEERS

804 ERIE STREET EAST, WINDSOR, ONTARIO, CANADA N9A 3Y4
TELEPHONE (519) 254-7926 FACSIMILE (519) 254-0895

DATE
JAN.4,2019

SCALE
NTS

DRAWN BY
JPA

AUTOCAD REF.
6970_FSR.dwg

PROJECT TITLE

RE-DEVELOPMENT OF 1055 TALBOT STREET
ST.THOMAS, ONTARIO

SHEET TITLE

SITE LOCATION

FIGURE No.

1

PROJECT No.

6970

(Part 34, Plan D-1054)

Part 3, Plan 11R-10471
P.I.N. 35188-0042

FIRST AVENUE

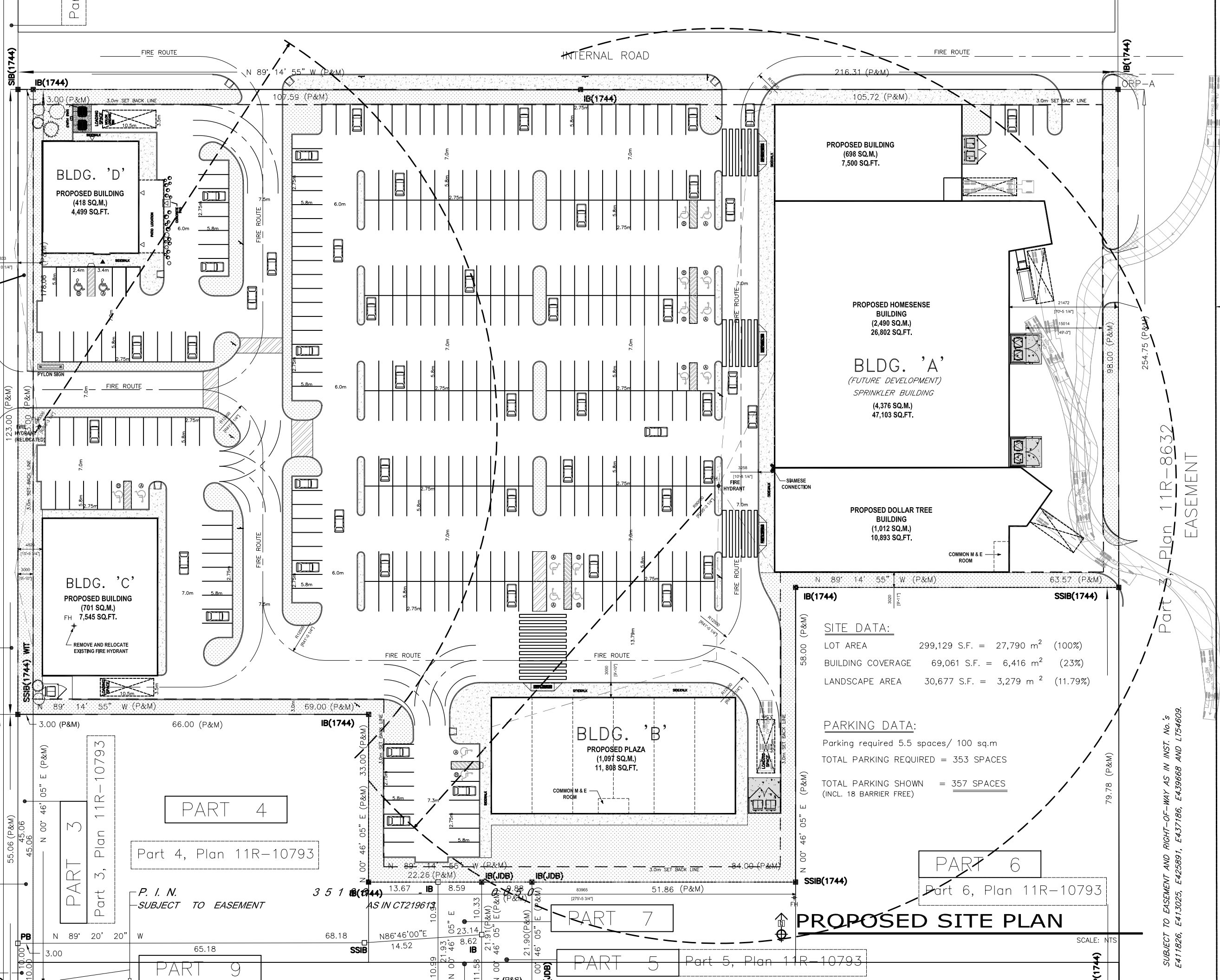
(DEDICATED BY BY-LAW 16-72, INST. No. 16)

SUBJECT TO EASEMENT

AS IN CT200891

Part 3, Plan 11R-10471
P.I.N. 35188-0042

(DEDICATED BY BY-LAW 16-72, INST. No. 16)



SITE DATA:

LOT AREA	299,129 S.F. = 27,790 m ²	(100%)
BUILDING COVERAGE	69,061 S.F. = 6,416 m ²	(23%)
LANDSCAPE AREA	30,677 S.F. = 2,879 m ²	(11.79%)

PARKING DATA:

Parking required 5.5 spaces/ 100 sq.m
TOTAL PARKING REQUIRED = 353 SPACES
TOTAL PARKING SHOWN = 357 SPACES
(INCL. 18 BARRIER FREE)

PROPOSED SITE PLAN

SCALE: NTS

SUBJECT TO EASEMENT AND RIGHT-OF-WAY AS IN INST. No.'s
E411826, E413025, E425891, E437186, E439668 AND LT54609.

ALEO ASSOCIATES INC.
Consulting Engineers

Prepared By: J.P.A.
Checked By: P.A.A.
Project Name: 1055 Talbot Street, St. Thomas, ON
Project No.: 8975

SANITARY SEWER DESIGN SHEET
COMMERCIAL DEVELOPMENT, LAND SOUTH OF 1055 TALBOT ST., ST. THOMAS, ON
PEAK SEWAGE FLOW

LOCATION						POPULATION				SEWAGE FLOW		
AREA	DEVELOPMENT AREA	FROM	TO	DELTA HEC.	TOTAL HEC.	PER HEC.	DELTA POP.	TOTAL POP.	PEAKING FACT.	INFIL I/sec	SEW. I/sec	TOTAL I/sec
A1	COMMERCIAL	-	-	2.78	2.78	60	167	167	4.18	0.28	2.23	2.51

Design Criteria:

- 1) Sewage Flow = 250 l/cap/day (0.0029 l/ha)
- 2) Sewage Flow (Incl. Uncertainty of 10%) = 0.0032 l/ha
- 3) Infiltration = 8,640 l/ha/day 0.1000 l/s/ha
- 4) Ultimate Flow Factor = $1+14/(4+P^{0.5})$
- 5) Manning's Coefficient = 0.013
- 6) Minimum Velocity = 0.6 m/s
Maximum Velocity = 4.5 m/s
- 7) Manning Coefficient = 0.013