

PROJECT NO: 332-4581

NOVEMBER 1, 2019

SENT VIA: EMAIL:

C/O MAXHAHNE@ME.COM

Planning and Development Services
Town of the Blue Mountains

**Attention: Ms. Denise Whaley, MSc MCIP RPP
Planner**

**RE: TRAFFIC OPINION LETTER
ABBOTT'S RESIDENTIAL DEVELOPMENT
LANSDOWNE STREET NORTH & HURON STREET WEST
TOWN OF THE BLUE MOUNTAINS**

Dear Ms. Whaley,

C.F. Crozier & Associates Inc. (Crozier) was retained by Engel & Völkers Collingwood to prepare a traffic analysis in support of the Site Plan Application for the proposed residential development located at the northeast corner of Lansdowne Street North and Huron Street West in the Town of the Blue Mountains. This Traffic Opinion Letter contains analysis of the following components:

- Forecasted trip generation and distribution of the proposed development;
- Qualitative assessment of traffic operations on the boundary road network;
- Sight distance requirements at the site accesses;
- Qualitative assessment of other traffic safety components associated with the proposed development, including access alignment and the one-way operation of the proposed laneway; and
- Impacts to active transportation within the site and on the boundary road network.

It is understood that the primary focus of the traffic study is traffic safety, given the residential nature of the surrounding area and the development proposal. Thus, it was assumed that a scoped Traffic Opinion Letter would be sufficient in lieu of a comprehensive Traffic Impact Study.

1.0 DEVELOPMENT PROPOSAL

The development proposes the construction of 22 residential condominium dwellings fronting a 6.0 metre wide public laneway spanning from Bay Street West to Huron Street West. The right-of-way (ROW) for the laneway is 20 metres and will include a 1.5 metre concrete sidewalk, streetlighting, a drainage buffer and a landscape buffer on the north side. The proposed laneway cross-section is attached to this letter.

The westerly terminus of the laneway will form the fourth leg of the existing intersection of Lansdowne Street North and Bay Street West, span east-west and then curve north-south to connect to Huron Street West opposite the unopened Victoria Street ROW.

A one-way eastbound/southbound operation is proposed for the laneway. This one-way operation is discussed further in Section 4.0.

The Draft Plan of Subdivision prepared by Van Harten Surveying Inc. is attached to this letter.

2.0 EXISTING CONDITIONS

2.1 Subject Property

The subject property is located in a residential neighbourhood fronting Georgian Bay. The subject property wraps around the existing residential dwellings at the northeast corner of Lansdowne Street North and Huron Street West. The subject property is zoned as R1-1 "Residential" per the Town of the Blue Mountains Zoning By-Law 2018-65.

2.2 Boundary Road Network

The boundary road network is described in **Table 1**.

Table 1: Boundary Road Network

Feature	Roadway		
	Lansdowne Street North	Huron Street West	Bay Street West
Direction	Two-way (North-South)	Two-way (East-West)	Two-way (East-West)
Jurisdiction	Town of the Blue Mountains	Town of the Blue Mountains	Town of the Blue Mountains
Classification	Local	Local	Local
Surrounding Uses	Residential		
Speed Limit	50 km/h assumed ¹	50 km/h assumed ¹	50 km/h assumed ¹
Span	Highway 26 to Lakeshore Drive	Westerly Terminus to Bruce Street North	Westerly Terminus to Lansdowne Street North
Number of lanes	Two	Two	Two
Pedestrian Facilities	None	Concrete sidewalk (south side – east of unopened Victoria Street ROW) Multi-use path (connecting to concrete sidewalk spanning through the unopened Victoria Street ROW)	Concrete sidewalk (north side)
Cross-Section	Rural	Rural	Rural (south side) Urban (north side)
Stop Control	None	Lansdowne Street North	Lansdowne Street North

Note 1: Speed limit of 50 km/h assumed per municipal regulation.

3.0 TRIP GENERATION

The proposed development will result in additional vehicles on the boundary road network that previously did not exist. The proposed development will also result in turning movements on the boundary road network.

Trip generation during the weekday a.m. and p.m. peak hour was forecasted for the proposed development using published data from the Institute of Transportation Engineers (ITE) Trip Generation

Manual, 10th Edition. The ITE Trip Generation Manual is a compendium of industry collected trip generation data across North America for a variety of land use and is used industry-wide as a source for trip generation forecasts.

The fitted curve equations for Land Use Category (LUC) 220 "Multifamily Housing (Low-Rise)" were applied to the proposed 22 units.

Table 2 outlines the trip generation for the site.

Table 2: Trip Generation

Land Use	GFA	Peak Hour	Trips Generated		
			Inbound	Outbound	Total
LUC 220 "Multifamily Housing (Low-Rise)"	22 units	A.M.	2	9	11
		P.M.	9	6	15

4.0 IMPACTS TO TRAFFIC OPERATIONS

The proposed development is expected to generate 11 and 15 total two-way trips during the weekday a.m. and p.m. peak period, respectively. These trip generation forecasts are low and are typically not associated with traffic operational issues nor external roadway improvements.

5.0 ONE-WAY OPERATION

A one-way eastbound/southbound operation is proposed for the 6.0 metre public laneway spanning from Lansdowne Street North to Huron Street West. The proposed site access to Lansdowne Street North will operate as an inbound only access with entry via a southbound left-turn, northbound right-turn, or eastbound through movement. The proposed site access to Huron Street West will operate as an outbound only access with exit via a left-turn or right-turn movement (or through movement if Victoria Street North is extended to Huron Street West).

A one-way system is proposed to increase the distance between the roadway and the existing residential properties north of the ROW.

The one-way operation will result in predictable travel patterns to and from the site and within the site; thus reducing the potential for vehicle-vehicle conflicts and increasing traffic safety. Additionally, the proposed alignment of the site accesses (opposite Bay Street West and the unopened Victoria Street North ROW) will mitigate vehicle-vehicle conflicts that would arise from an offset access alignment.

6.0 SIGHT DISTANCE ANALYSIS

The available sightlines at the proposed site access to Huron Street West were measured and compared to the standards set out in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR). Sight distance was measured from the proposed site accesses using the following assumptions:

- A standard driver eye height of 1.08 metres for a passenger car, and
- A 4.4 metre setback from the approximate extension of the outer curb to represent a vehicle waiting to exit the site.

Intersection sight distance is calculated using equation 9.9.1 from the GDGCR as outlined below:

$$ISD = 0.278 * V_{major} * tg$$

Where;

ISD = Intersection Sight Distance

V_{major} = design speed of roadway (km/h)

tg = assumed time gap for vehicles to turn from stop onto roadway (s)

The design speed of a local roadway in an urban environment is typically equal to or 10 km/h greater than the posted speed limit. As the assumed speed limit on Lansdowne Street North and Huron Street West is 50 km/h, a design speed of 60 km/h was assumed.

The proposed one-way operation of the internal laneway will result in only one outbound site access (the access to Huron Street West) at which minimum sight distance must be satisfied for outbound turning vehicles. Thus, sight distance requirements were assessed for the Huron Street West site access.

Table 3 outlines the sight distance analysis for the proposed site access.

Table 3: Sight Distance Analysis

Feature	Huron Street West Site Access
Access Type	Outbound only
Posted Speed Limit of Roadway	50 km/h
Assumed Design Speed	60 km/h
Base Time Gap	7.5 s (for left-turn) ¹
Additional Time Gap	None
Vertical Alignment of Roadway	Less than 3% grade
Horizontal Alignment of Roadway	Straight
Sight Distance Required	130 metres ²
Measured Sight Distance	> 210 metres (both directions)
Minimum Sight Distance Satisfied?	Yes

Note 1: Time gap for left-turning vehicles from a stop onto a two-lane highway with no median and with a grade less than 3%. Value from Table 9.9.3 in the GDGCR.

Note 2: Sight distance values calculated from Intersection Sight Distance equation 9.9.1 in the GDGCR.

As outlined in **Table 3**, minimum sight distance requirements are satisfied at the proposed outbound site access to Huron Street West.

Therefore, the proposed development is supportable from a sight distance perspective.

7.0 ACTIVE TRANSPORTATION

The proposed laneway cross-section consists of a 1.5 metre concrete sidewalk on the south and west sides of the laneway (south for the east-west segment and west for the north-south segment). The provision of a pedestrian sidewalk will provide separation between pedestrian and vehicular traffic on the laneway and thus increase safety for pedestrians within the site.

Additionally, the provision of a pedestrian sidewalk within the site will provide continuous pedestrian connectivity between the existing sidewalk on Bay Street West and the existing sidewalk on Huron Street West (east of the unopened Victoria Street ROW).

8.0 CONCLUSIONS

The analysis contained within this letter has resulted in the following key findings:

- The proposed development is expected to generate 11 and 15 total two-way trips during the weekday a.m. and p.m. peak period, respectively.
- These trip generation forecasts are low and are typically not associated with traffic operational issues nor external roadway improvements.
- The one-way operation of the public laneway will result in predictable travel patterns to and from the site and within the site; thus, reducing the potential for vehicle-vehicle conflicts and increasing traffic safety.
- The proposed alignment of the site accesses (opposite Bay Street West and the unopened Victoria Street North ROW) will mitigate vehicle-vehicle conflicts that would arise from an offset access alignment.
- The proposed pedestrian sidewalk within the site will:
 - provide separation between pedestrian and vehicular traffic on the laneway and thus increase safety for pedestrians within the site; and
 - provide continuous pedestrian connectivity between the existing sidewalk on Bay Street West and the existing sidewalk on Huron Street West (east of the unopened Victoria Street ROW).

Therefore, the proposed development is supportable from a transportation operations and safety perspective.

The analysis contained within this report was completed using the Draft Plan of Subdivision prepared by Van Harten Surveying Inc. Any minor updates to the development proposal are not expected to materially change the conclusions contained within this report.

We trust that this letter addresses any traffic you may have. Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Yours truly,

C.F. CROZIER & ASSOCIATES INC.



Alexander J. W. Fleming, MBA, P.Eng.
Associate

/dl

Encl.

Draft Plan of Subdivision
Proposed Road Section

C.F. CROZIER & ASSOCIATES INC.



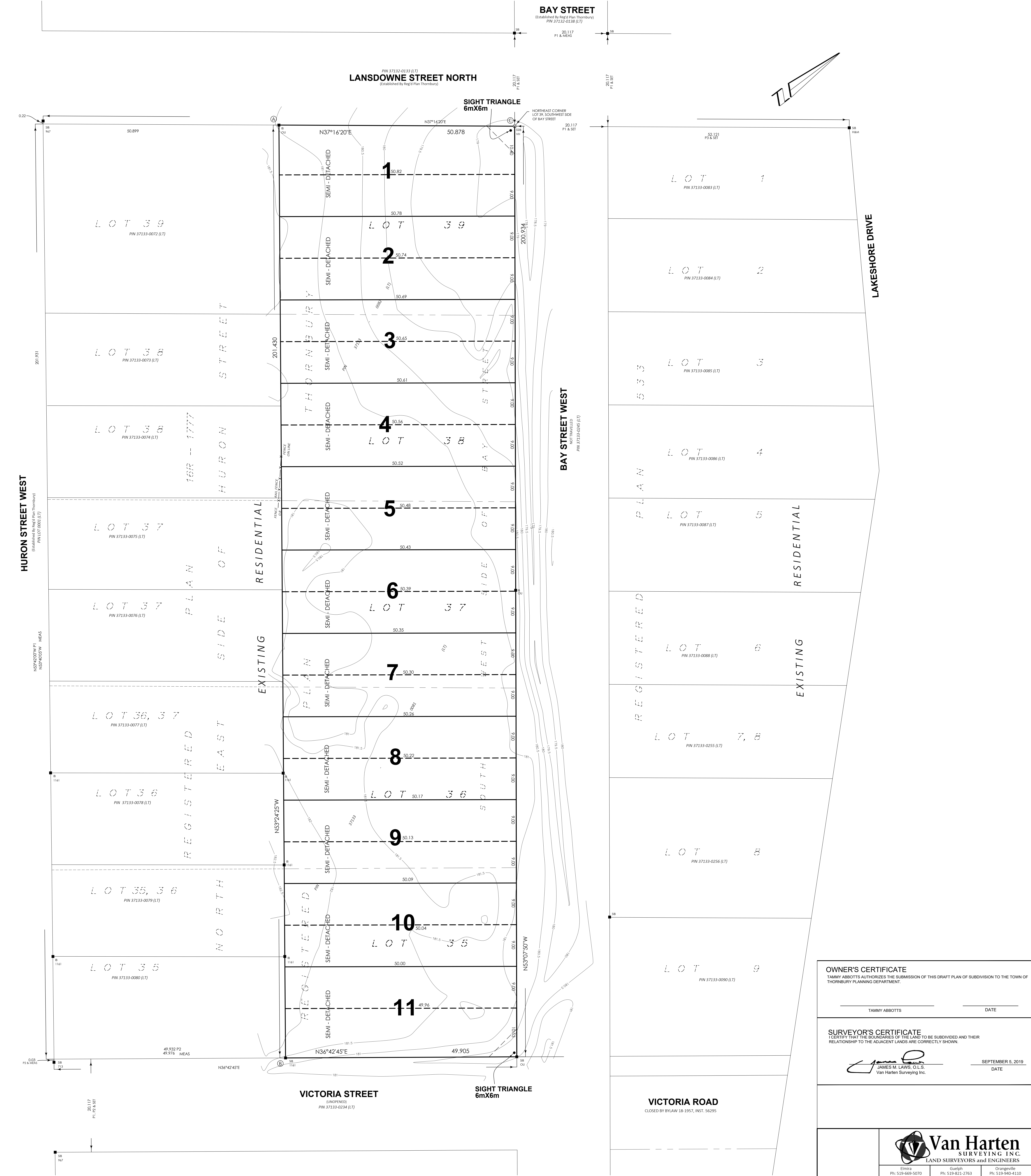
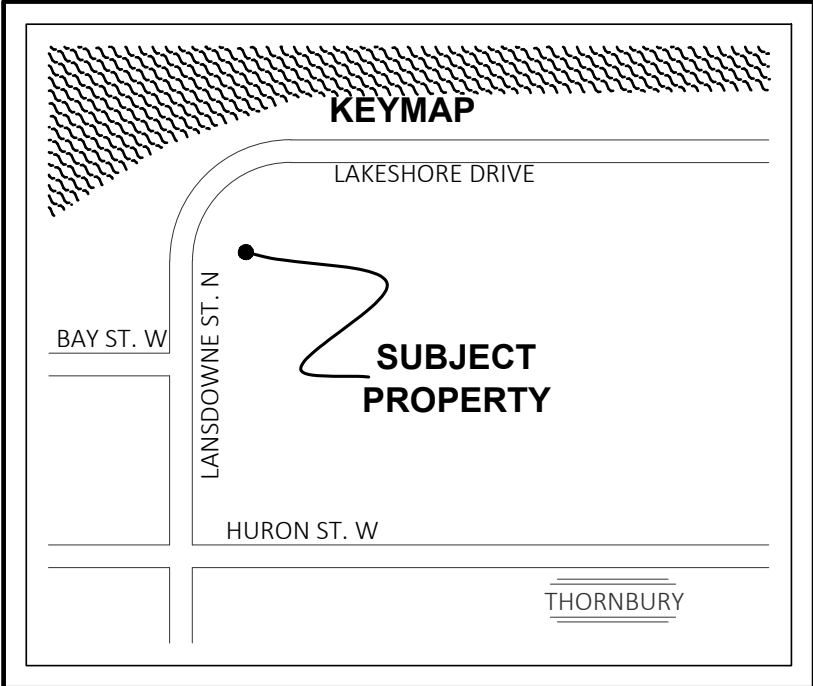
Darren J. Loro, C.E.T.
Transportation Technologist

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SCHEDULE: RE: SECTION 51 - THE PLANNING ACT.			
(a) BOUNDARIES AS SHOWN			
(b) WIDTHS OF ROADS AS SHOWN			
(c) KEY PLAN AS SHOWN			
(d) RESIDENTIAL SEMI-DETACHED LOTS			
(e) RESIDENTIAL			
(f) DIMENSIONS OF UNITS AS SHOWN			
(g) NATURAL FEATURES N/A			
(h) MUNICIPAL WATER AVAILABLE			
(i) GRAVEL AND LOAM			
(j) CONTOURS AS SHOWN			
(k) ALL MUNICIPAL SERVICES AVAILABLE			
(l) NIL			
LAND USE SCHEDULE			
DESCRIPTION	UNITS	LOTS/BLOCKS	AREA (ha.)
Semi-Detached Residential	22	LOTS 1-11	1.01

LEGAL DESCRIPTION
ALL OF LOTS 35, 36, 37, 38, AND 39
SOUTHWEST SIDE OF BAY STREET
TOWN OF THORNBURY
COUNTY OF GREY

SCALE 1 : 300
0 5 10 15 meters
VAN HARTEN SURVEYING INC.



OWNER'S CERTIFICATE
TAMMY ABBOTTS AUTHORIZES THE SUBMISSION OF THIS DRAFT PLAN OF SUBDIVISION TO THE TOWN OF THORNBURY PLANNING DEPARTMENT.

TAMMY ABBOTTS

DATE

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE CORRECTLY SHOWN.

JAMES M. LAWS, O.L.S.
Van Harten Surveying Inc.

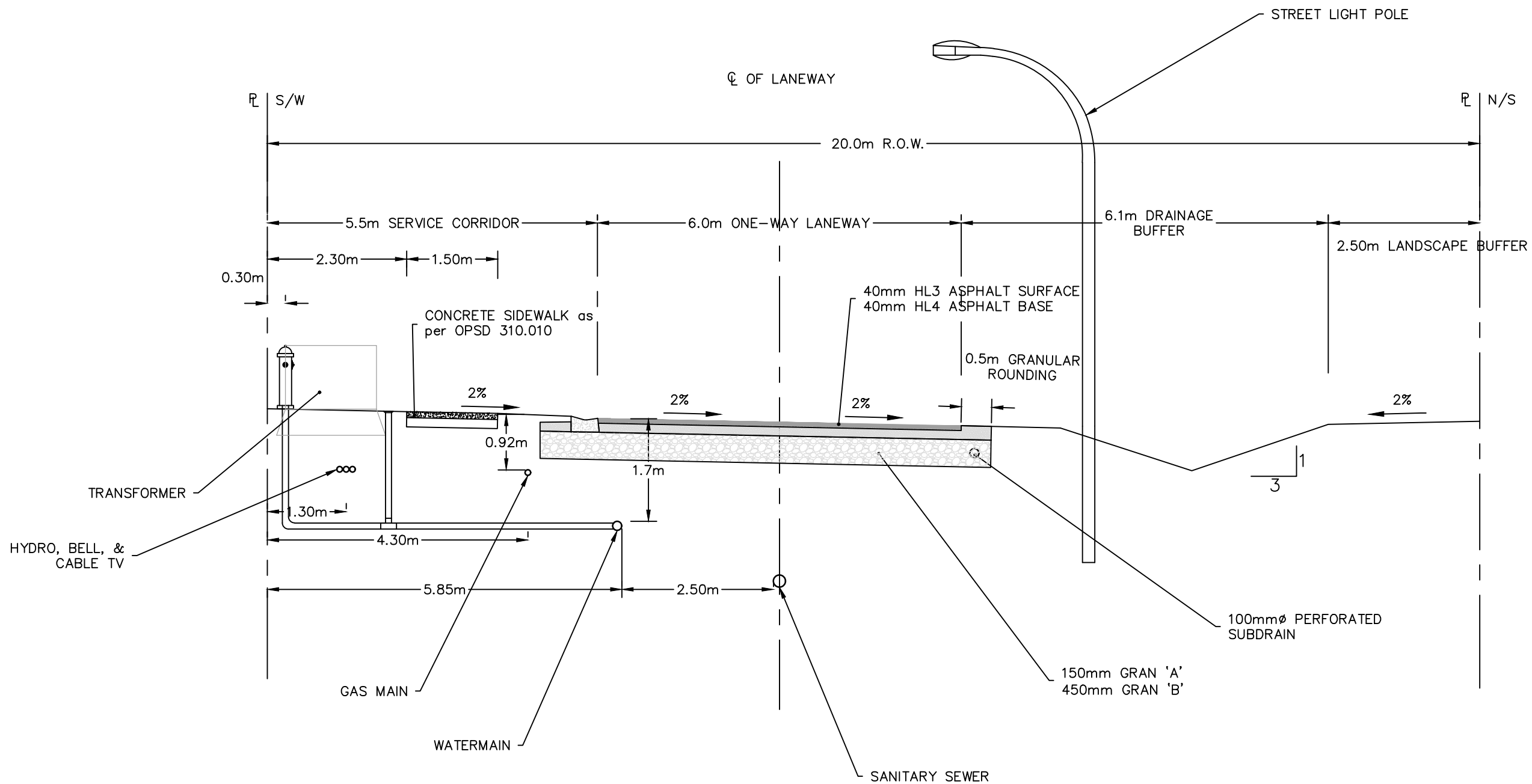
DATE



Van Harten
SURVEYING INC.
LAND SURVEYORS and ENGINEERS

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DRAWN BY: S. J.	CHECKED BY: JML
PROJECT No. 25655-18	

SEP 12, 2019 9:38am
C:\THORNBURY\ABBOTTS CONDODRAFT PLAN INFO\DRAFT PLAN ABBOTT'S-1.dwg



NOTES:
REFER TO TOWN OF THE BLUE
MOUNTAINS ENGINEERING
STANDARDS FOR "URBAN" ROAD
SECTIONS FOR 20M RIGHT OF WAY

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

TEMPORARY BENCHMARKS
TBM#1-
TBM#2-
TBM#3-

Town

No.	ISSUE	DATE: MM/DD/YYYY
1	ISSUED FOR DRAFT PLAN APPROVAL	10/04/2019

DRAFT
FOR DISCUSSION PURPOSES ONLY

Project: **ABBOTTS RESIDENTIAL DEVELOPMENT
TOWN OF THE BLUE MOUNTAINS**
Drawing: **PROPOSED ROAD SECTION**

CROZIER
CONSULTING ENGINEERS

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Drawn By	N.L.	Design By	J.P.	Project	332-4581
Check By	K.M.	Check By	G.C.	Scale	1:750
				Drawing	FIG. 2