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Transportation Study

PROPOSED RESIDENTIAL DEVELOPMENT

154 Wilson Street East
Ancaster, City of Hamilton

August 16, 2018
Project No: NT-18-058

520 Industrial Parkway South, Suite 201
Aurora ON L4G 6W8

Phone: 905-503-2563
www.nextrans.ca



NextEng Consulting Group Inc.

August 16, 2018

Mr. Ted Valeri

Valery Homes c/o Ted Valeri
2140 King Street East
Hamilton, ON L8K 1W6

**Re: Transportation Study
154 Wilson Street East
Ancaster, City of Hamilton
Our Project No. NT-18-058**

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) is pleased to present the enclosed Transportation Study for the above noted site in support for a proposed Official Plan and Zoning By-law Amendment applications.

The subject site is located south of Wilson Street East, in the City of Hamilton. The subject site municipally known as 154 Wilson Street East is currently occupied by a single detached house. Based on the preliminary site plan prepared by Lintack Architects Inc., dated June 2018, the development proposal is to redevelop the existing subject lands into a 32-unit apartment building. Access to the site is envisioned via a full movement driveway onto Wilson Street East. A total of 45 parking spaces are provided.

The study concludes that the development proposal can adequately be accommodated by the existing transportation network with manageable traffic impact to the adjacent public roadways. We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Nextrans Consulting Engineers

A Division of NextEng Consulting Group Inc.

Prepared by:

A handwritten signature in blue ink that reads "Zara Georgis".

Zara Georgis, EIT
Engineer-in-Training

Reviewed by:

A handwritten signature in black ink that reads "R. Pernicky".

Richard Pernicky, CET, MITE
Principal

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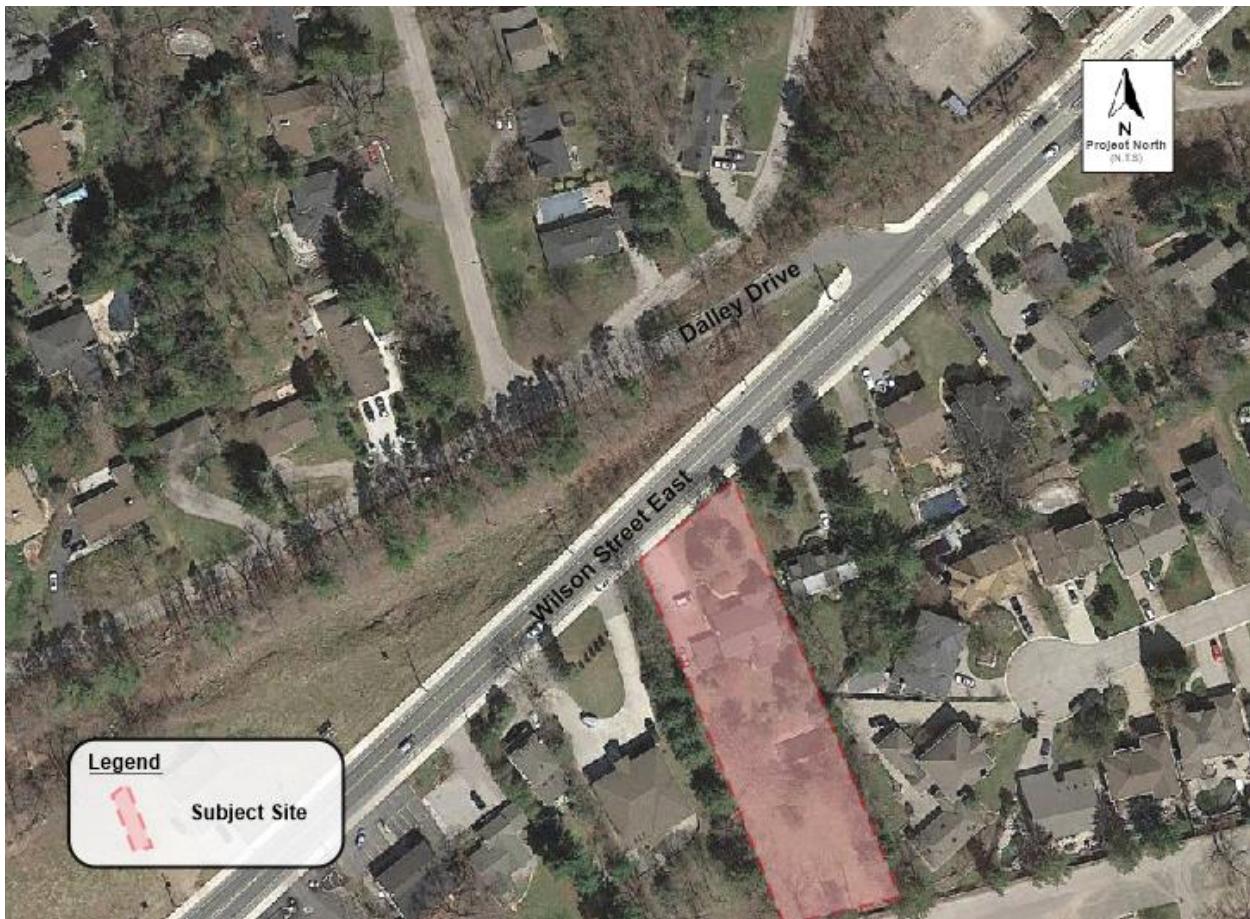
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- Appendix D – Future Background Level of Service Calculations
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1.0 INTRODUCTION

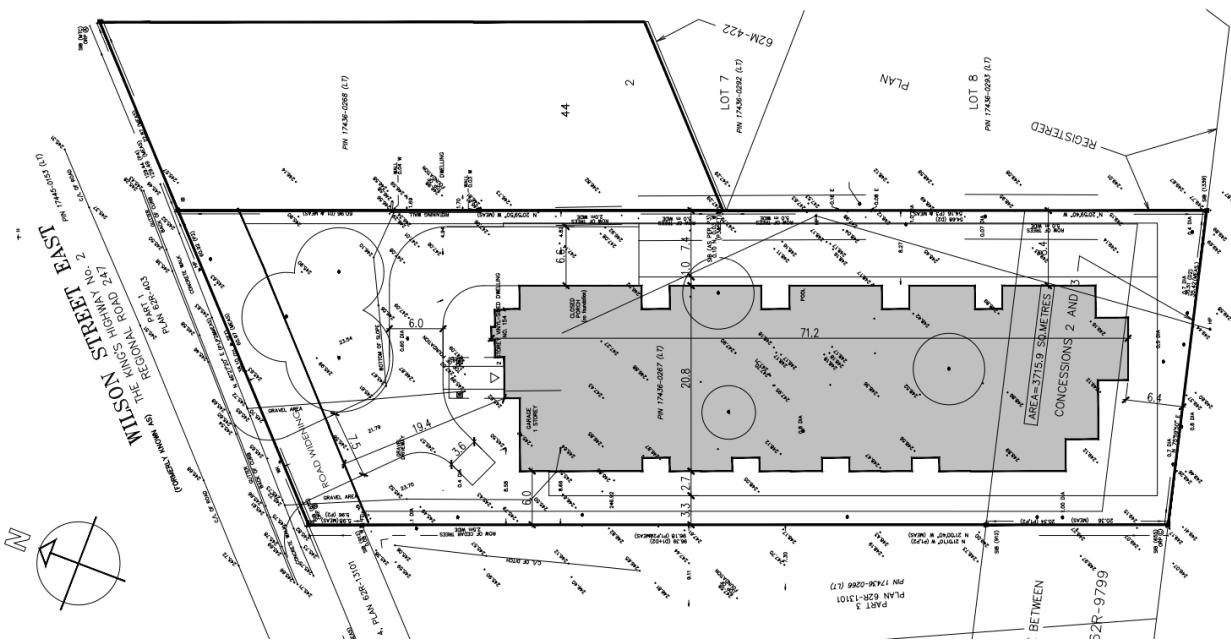
Nextrans Consulting Engineers was retained by Valery Homes (the 'Client') to undertake a Traffic Impact Study, Parking Analysis and Transportation Demand Management for an Official Plan and Zoning By-law Amendment in support of a proposed 3-storey residential development located on Wilson Street East, in the City of Hamilton. The location of the proposed development is illustrated in **Figure 1-1**.

Figure 1-1 – Site Location



The subject site municipally known as 154 Wilson Street East, in Ancaster, is currently occupied by a single detached house. Based on the preliminary site plan prepared by Lintack Architects Inc., dated June 2018, the development proposal is to redevelop the existing subject lands into a 32-unit apartment building. A total of 45 parking spaces are provided. Access to the site is envisioned via a full movement driveway onto Wilson Street East. The preliminary site plan is provided in **Figure 1-2; Appendix A** also provides a larger scale version of the proposed site plan.

Given the residential based nature of the development proposal, the analysis will include the weekday morning and afternoon peak periods for assessment purposes.

Figure 1-2 – Proposed Site Plan

2.0 EXISTING TRAFFIC CONDITIONS

2.1. Existing Road Network

The existing subject lands are located south of Wilson Street East, in the City of Hamilton. The road network is described as follows:

Wilson Street East: is classified as a major arterial road under the jurisdiction of the City of Hamilton. It has a two-lane cross section in the vicinity of the subject site. Sidewalks are provided on both sides of the roadway. Wilson Street East maintains a posted speed limit of 50 km/h in the vicinity of the subject site.

2.2. Existing Active Transportation Network

Sidewalks

The subject study area is serviced with dedicated walkways. There are currently sidewalks available on both sides of Wilson Street East.

Bicycle Lanes

The subject study area is serviced with dedicated bicycle lanes. There are currently bicycle lanes on both sides of Wilson Street East.

2.3. Active Transportation Mode and Assessment

Existing Conditions

The review of the current amenities in the vicinity of the proposed development indicates there are significant retail, food and service establishments in the vicinity of the proposed development, many of which can be easily reached by non-auto options. Amenities within an 850-m radius (approximately a 10-minute walk) include Starbucks, Tim Hortons, Ancaster Farmers Market, Wilson Street Veterinary Clinic, St. Ann Catholic Elementary School, St. Ann's Parish, Ancaster Montessori School, St. John's Anglican Church, Hamilton Public Library – Ancaster Branch, Ancaster Orthodontics, RBC, Ancaster Little Gems Children's Centre, Spa at Ancaster, Village Hair Design, Rexall Pharma Plus, Tim Hortons, etc.

2.4. Existing Traffic Volumes

Existing traffic volumes at the study area intersections were undertaken by The City of Hamilton on Thursday, October 12, 2017 during the morning (7:00 a.m. to 10:00 a.m.) and afternoon (4:00 p.m. to 7:00 p.m.) peak periods. Detailed existing traffic data are provided in **Appendix B**.

2.5. Existing Traffic Assessment

The existing volumes are illustrated in **Figure 2-2** and were analyzed using Synchro 9 software. The methodology of the software follows the procedures described and outlined in the Highway Capacity Manual, HCM 2000, published by the Transportation Research Board. The detailed results are provided in **Appendix C** and summarized in **Table 2.1**.

Figure 2-2 – Existing Traffic Volumes

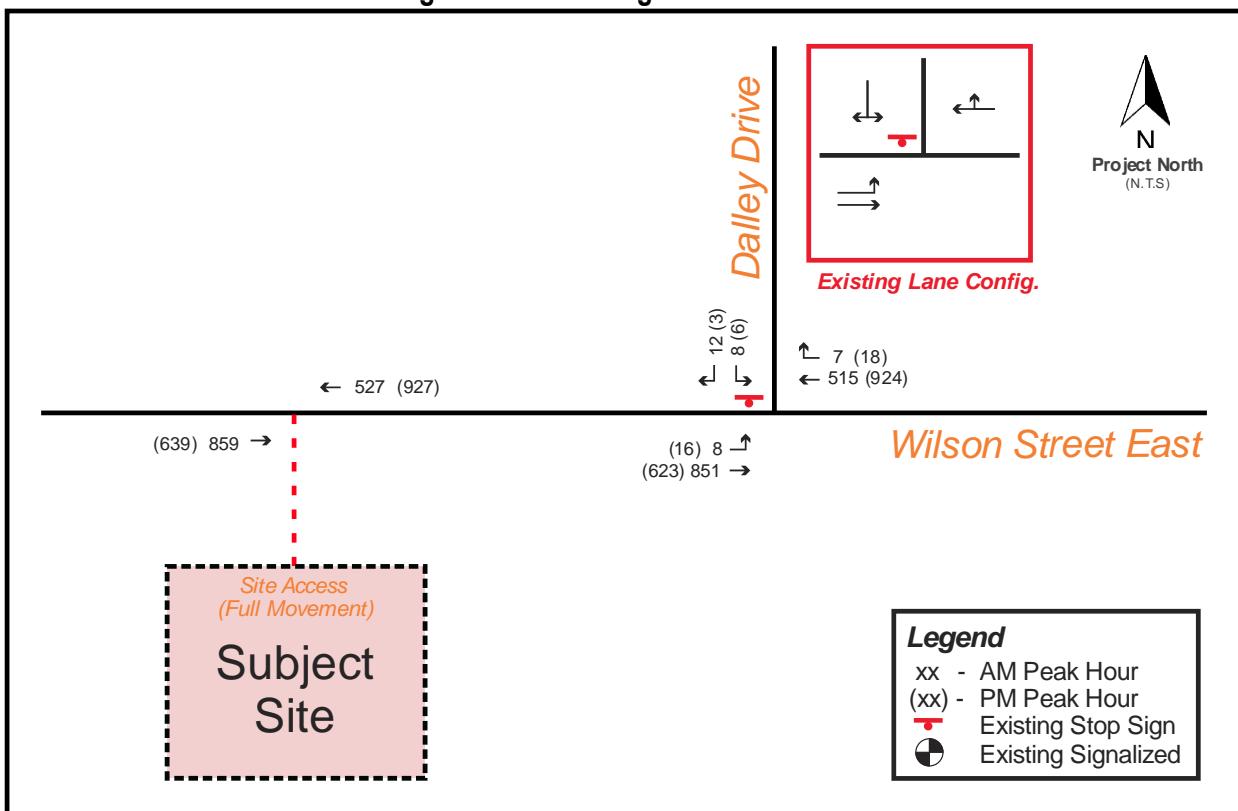


Table 2.1 – Level of Service – Existing Traffic Assessments

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)
Wilson Street East & Dalley Drive	EBL	A (0.01)	8.6	0.2	B (0.03)	10.5	0.6
	SBLR	C (0.09)	21.8	2.3	E (0.08)	38.2	2.1

Under existing conditions, the study intersections are currently operating at good levels of service during both peak periods with no critical movements.

3.0 FUTURE BACKGROUND CONDITIONS

A 5-year (2023) horizon period was selected and assumed in this analysis, which generally coincides with the full build out of the proposed development. For a conservative analysis, a standard 2% growth rate per annum is assumed for the east-west through traffic on Wilson Street East.

The future (2023) background traffic volumes are provided in **Figure 3-1**. **Table 3.1** summarizes the level of service at the given intersections under future background traffic conditions. Detailed output analysis can be found in **Appendix D**.

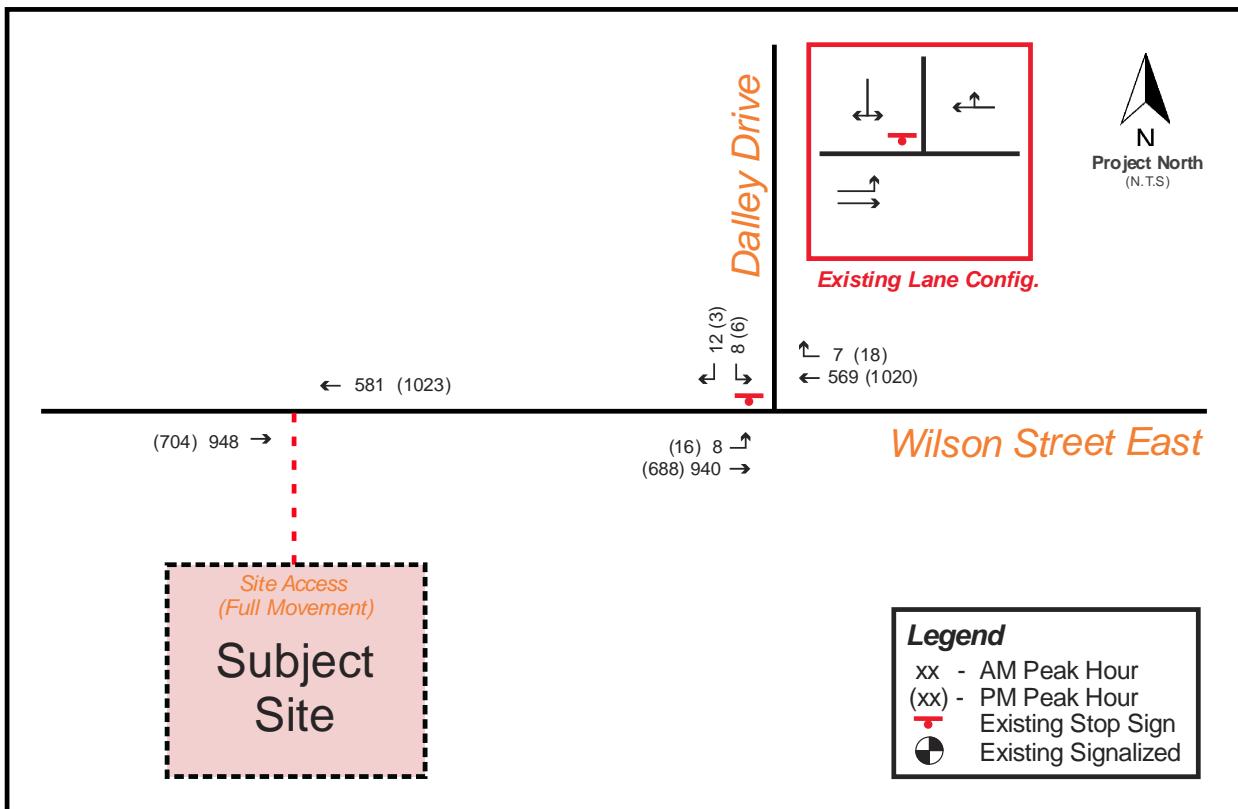
Figure 3-1 – Future (2023) Background Traffic Volumes

Table 3.1: Future (2023) Background Traffic Levels of Service

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)
Wilson Street East & Dalley Drive	EBL SBLR	A (0.01) D (0.11)	8.8 25.6	0.2 2.8	B (0.03) E (0.11)	11.0 48.3	0.6 2.7

As summarized in **Table 3.1**, it is shown that during future background traffic conditions the subject study area intersections continue to operate at good level of services with no changes to expected operations.

4.0 SITE TRAFFIC

The development proposal is to redevelop the existing subject lands into a 32-unit apartment building. Trip rates and site generated trips were derived from the information contained in the *Trip Generation Manual, 10th Edition* published by the Institute of Transportation Engineers (ITE) for “Multifamily Housing (Low-Rise)” (LUC 220). The trip generation summary is shown in **Table 4.1**.

Table 4.1 – Site Traffic Trip Generation (Based on ITE)

ITE Land Use	Parameter	Morning Peak Hour			Afternoon Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) (32 Units)	Gross Trips	4	12	16	13	8	21
	Gross Rate	0.13	0.37	0.50	0.41	0.25	0.66
Total		4	12	16	13	8	21

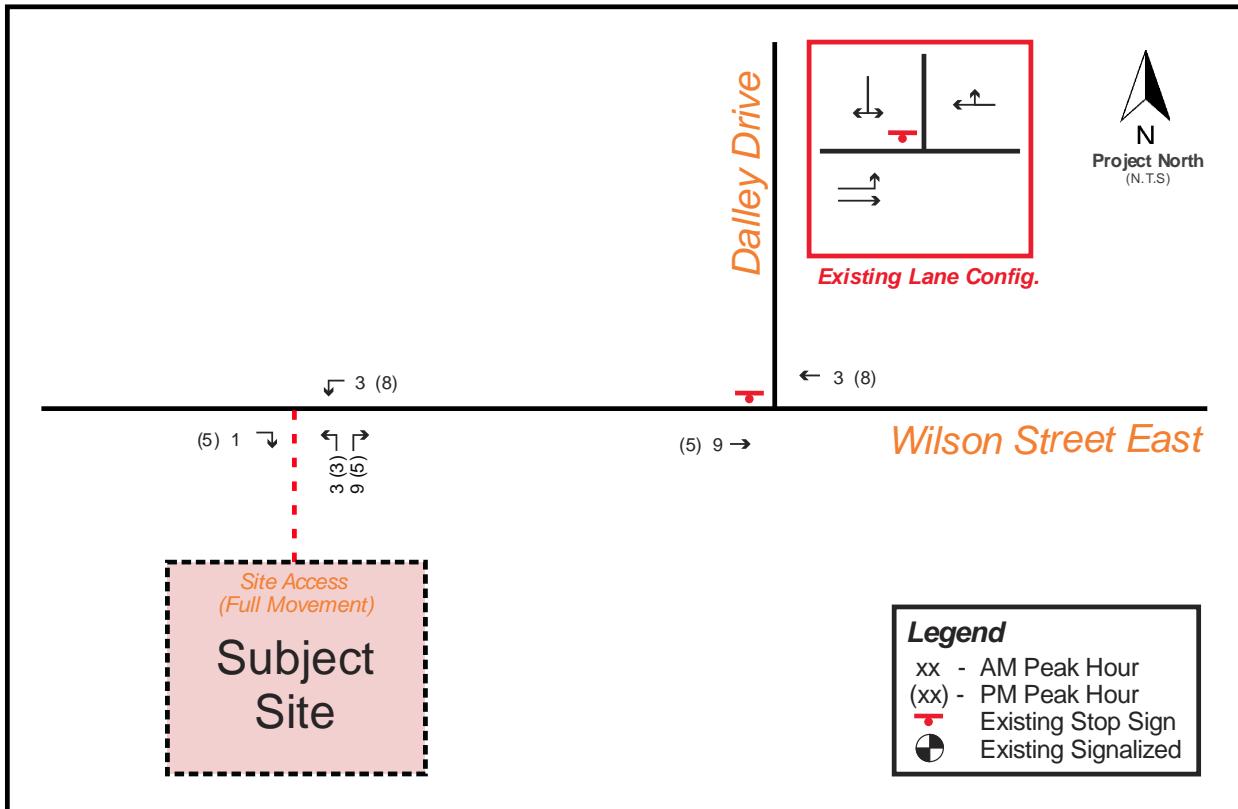
As shown in **Table 4.1**, the proposed development is anticipated to generate 16 two-way auto trips (4 inbound and 12 outbound) during the AM peak hours and 21 two-way auto trips (13 inbound and 8 outbound) during the PM peak hours.

The assumptions for the trip distribution rates are based on the information extracted from the 2016 Transportation Tomorrow Survey (TTS) and existing traffic patterns and routes that drivers would likely take to access the subject site and engineering judgement based on ease of site access. As a result, site trip distribution is summarized for the inbound and outbound site traffic movements during the morning and afternoon peak hours in **Table 4.2** with the trip assignment illustrated in **Figure 4-1**.

Table 4.2 – Site Traffic Trip Distribution

Direction	Via	AM Peak Hour		PM Peak Hour	
		Inbound	Outbound	Inbound	Outbound
East	Wilson Street East	75%	75%	60%	60%
West	Wilson Street East	25%	25%	40%	40%
Total		100%	100%	100%	100%

Figure 4-1 – Site Generated Traffic Assignments



5.0 FUTURE TOTAL TRAFFIC CONDITIONS

The forecasted 2023 future total traffic volumes (future background volumes plus site generated traffic volumes) are illustrated in **Figure 5-1** and were analyzed using Synchro 9 software with stopped controlled at the proposed site access. The detailed calculations are provided in **Appendix E** and summarized in **Table 5.1**.

Figure 5-1 – Future (2023) Total Traffic Volumes

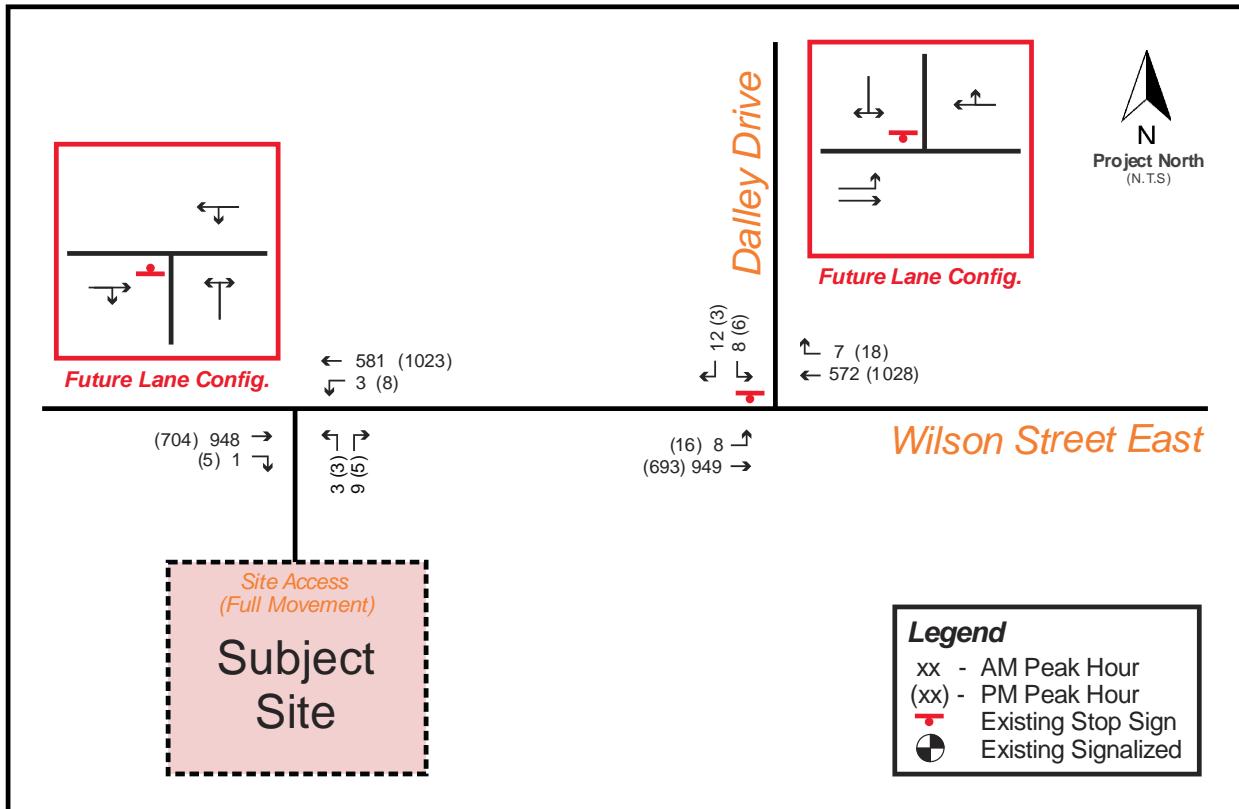


Table 5.1 – Level of Service – Future Total Traffic Assessments

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)
Wilson Street East & Dalley Drive	EBL	A (0.01)	8.8	0.2	B (0.03)	11.1	0.7
	SBLR	D (0.11)	26.0	2.9	E (0.11)	49.2	2.7
Site Access & Wilson Street East	WBTL	A (0.00)	0.1	0.1	A (0.01)	0.4	0.2
	NBLR	C (0.06)	23.9	1.5	D (0.05)	29.8	1.2

Under future total traffic conditions, the study intersection and proposed accesses are expected to continue operating with good level of service during both peak periods.

6.0 PARKING ASSESSMENT

The proposed development is subject to the Town of Ancaster's Zoning By-Law No. 87-57 and the City of Hamilton Zoning By-Law 05-200. The technical parking requirements for the proposed development is detailed in **Table 6.1** and **Table 6.2**.

Table 6.1 – Vehicle Parking Requirement (Zoning By-Law 87-57)

Use	Units	Rate	Parking Requirement
Apartment – Resident	32 units	2 spaces per unit	64
Apartment - Visitor		0.33 spaces per unit	11
Total			75

Table 6.2 – Vehicle Parking Requirement (Zoning By-Law 05-200)

Use	Units	Rate	Parking Requirement
Apartment – Resident	32 units	1 space per unit	32
Apartment - Visitor		0 spaces per unit	0
Total			32

Based on the Town of Ancaster Zoning By-Law No. 87-57, a minimum of 75 parking spaces will be required for the proposed development. The preliminary site plan provides for a total of 45 visitor parking spaces resulting in a technical deficiency of 30 parking spaces.

Based on the City of Hamilton Zoning By-Law 05-200, a minimum of 32 parking spaces will be required for the proposed development. The preliminary site plan provides for a total of 45 visitor parking spaces resulting in a technical surplus of 13 parking spaces.

It is Nextrans opinion that the City of Hamilton Zoning By-Law 05-200 parking rates for the proposed development are more reasonable and justified for the proposed characteristics of the proposed development and the area. It is also our opinion that current City of Ancaster By-Law 87-57 parking requirements may be excessive based on the existing travel patterns and behaviours in the area, as well as to support the City's TDM initiatives and Official Plan objectives.

7.0 SITE PLAN REVIEW

It is recommended that the proposed site access design be consistent with the Town of Ancaster's Site Plan Submission Guidelines.

AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed parking spaces. As illustrated in **Figure 7-1**, the AutoTURN analysis demonstrates that a 5.6 m long Passenger Car (P TAC – 2017) can effectively maneuver through the development area. **Figure 7-2** demonstrates that parking stalls 18 and 19 must be labelled small car only.

8.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. Typically, TDM strategies are for residential and office developments where large quantities of people congregate in one origin or destination. However, TDM strategies for rental buildings can be arranged but on a lesser scale.

Based on our experience, excessive parking supply imposes environmental costs, contradicts community development objectives for more livable and walkable communities, and tends to increase driving and discourage the use of alternative mode of travel. It is anticipated that the combination of reduced parking supply and an efficient public transit system will encourage the use of alternative modes of travel.

8.1. Transit and Active Transportation Mode Assessment

The proposed development is situated in a transit supportive neighbourhood with bus stops located approximately 1-minute to the subject site within comfortable walking distance. The route services in the immediate area are described below and illustrated in **Appendix F**:

- **Route 16:** Route 16 operates between Meadowlands Terminal and Wilson & Garner Road. Weekday service operates approximately every 30 minutes. Saturday service operates approximately every hour. There is no Sunday or Holiday service provided. Accessible service and bike racks are provided on the route.

Based on the study prepared by the Ministry of Transportation Ontario entitled: 'Transit Supportive Guidelines', dated January 2012, transit users are generally willing to walk 400 meters to a local stop or 800 meters to a rapid transit station. The Wilson Street at Dalley Drive bus stop is located approximately 80 meters from the subject site (about a 1-minute walk).

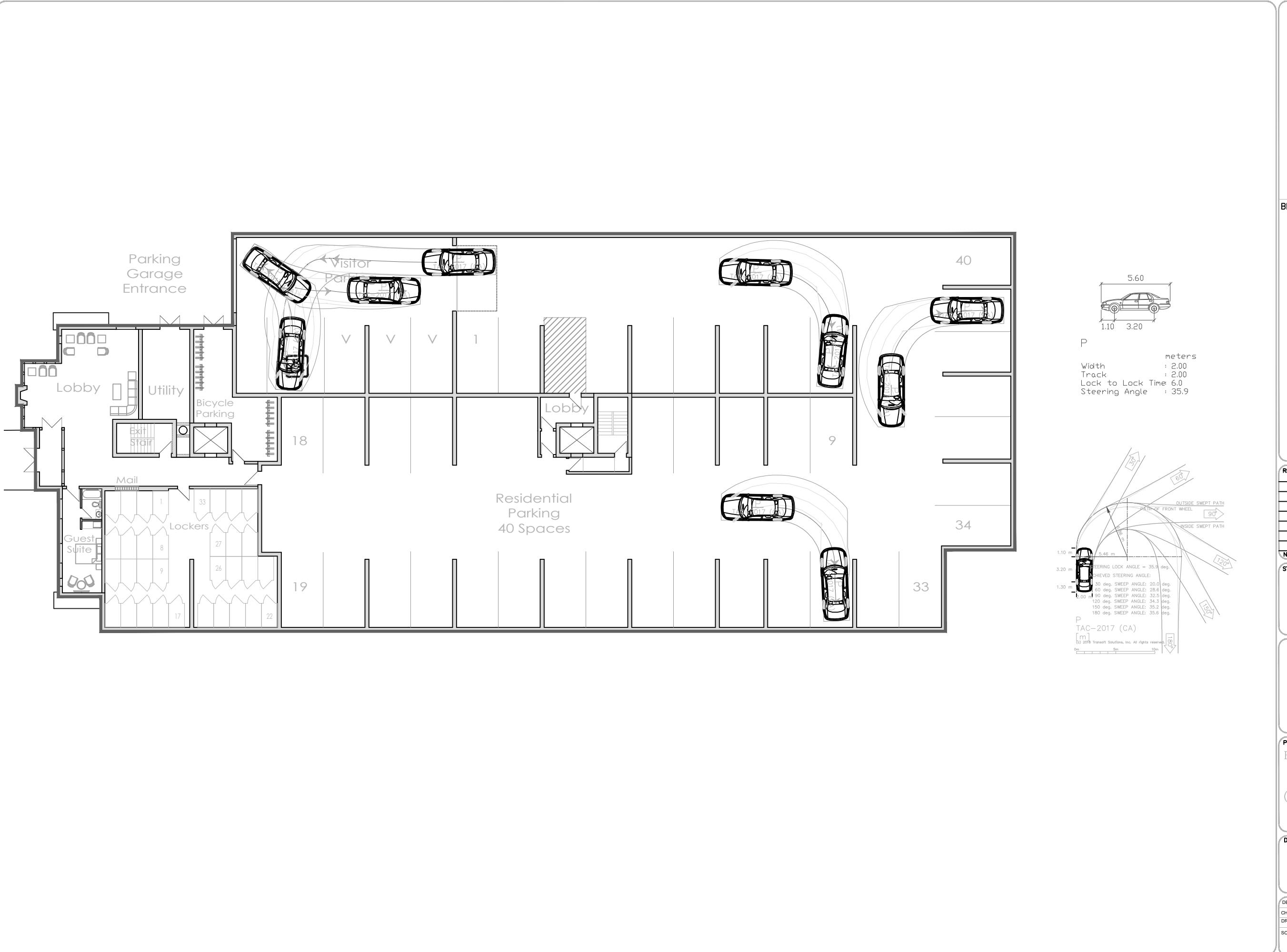
8.2. TDM Implementation

The owner is committed to promote sustainable transportation systems. It actively encourages its tenants to explore and take advantage of the alternative modes of travelling available within their neighbourhood. The *City of Hamilton* webpage can provide a comprehensive list of items including materials, e-resources, links and PDF brochures on the following categories: Public Transit, Smart Commute, Cycling Information, and Active Transportation.

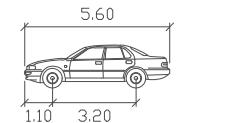
9.0 CONCLUSION

The findings and conclusions of our analysis are as follows:

- The development proposal is to redevelop the existing subject lands into a 32-unit apartment building. A total of 45 parking spaces are provided. Access to the site is envisioned via a full movement driveway onto Wilson Street East.
- The proposed development is anticipated to generate 16 two-way auto trips (4 inbound and 12 outbound) during the AM peak hours and 21 two-way auto trips (13 inbound and 8 outbound) during the PM peak hours.
- The intersection capacity analysis results (based on the methodology and procedures outlined in the Highway Capacity Manual, HCM 2000, published by the Transportation Research Board) indicate that the study intersections and existing accesses are expected to operate with good levels of service.
- Based on the City of Hamilton Zoning By-Law 05-200, a minimum of 32 parking spaces will be required for the proposed development. The preliminary site plan provides for a total of 45 visitor parking spaces resulting in a technical surplus of 13 parking spaces.
- The proposed site plan is accessible from a circulation perspective. Parking stalls 18 and 19 must be labelled small car only.



BENCHMARK



P	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

REVISIONS

nexTrans
CONSULTING ENGINEERS

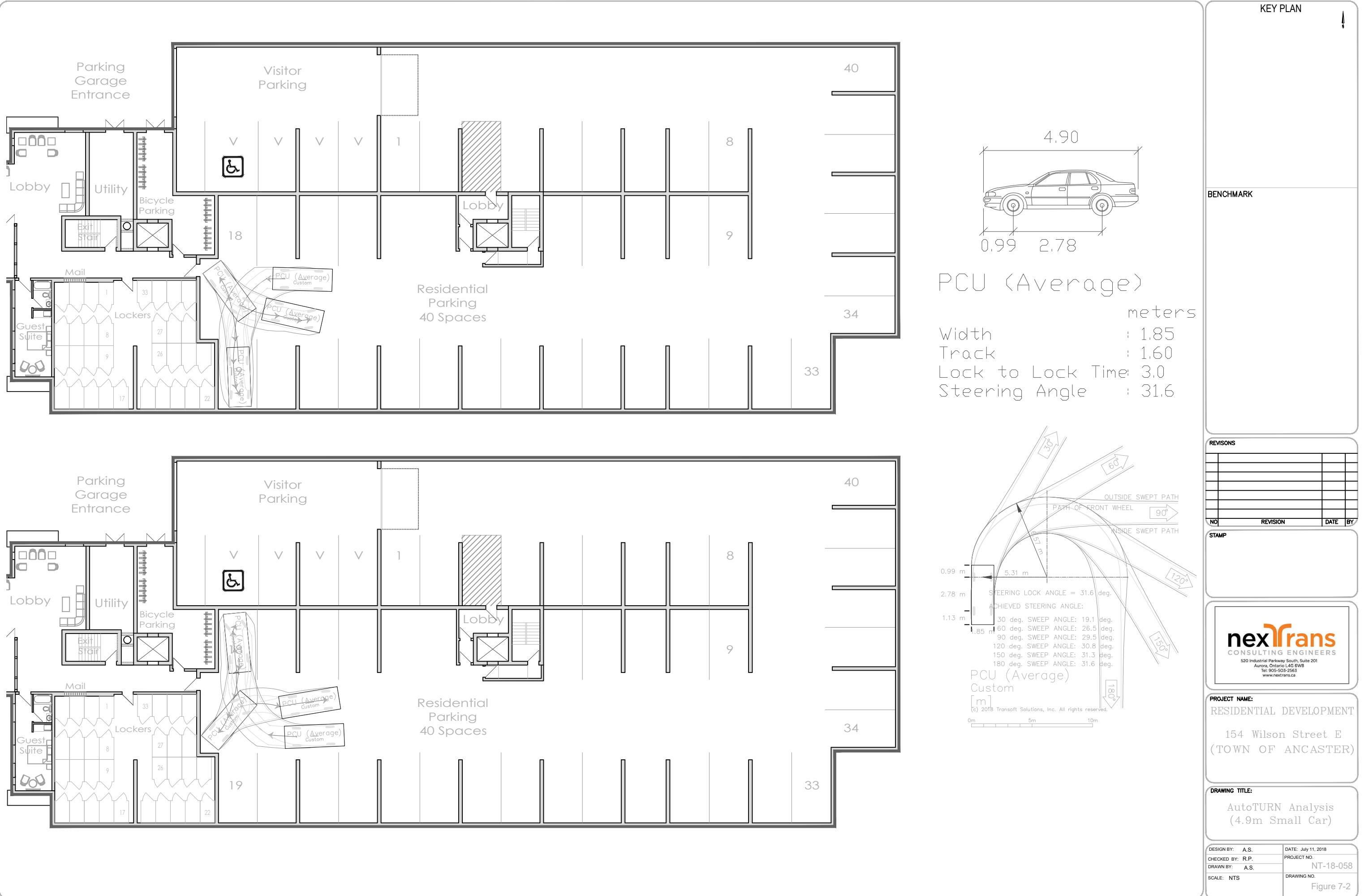
PROJECT NAME:
RESIDENTIAL DEVELOPMENT

154 Wilson Street E
(TOWN OF ANCASTER)

DRAWING TITLE:

AutoTURN Analysis
(P TAC-2017)

DESIGN BY:	A.S.	DATE:	July 11, 2018
CHECKED BY:	R.P.	PROJECT NO.	NT-18-058
DRAWN BY:	A.S.	DRAWING NO.	
SCALE:	NTS	Figure 7-1	



Appendix A - Proposed Site Plan



SITE STATISTICS:				
LOT AREA	3713.76m ²			
LOT FRONTAGE	38.1m			
LOT COVERAGE	1325m ² (36%)			
LANDSCAPED AREA	1974.5m ² (53%)			
ZONE - TO BE DETERMINED	REQUIRED	PROVIDED		
SETBACKS				
Front Yard		19.4m		
East Side Yard		8.4m		
West Side Yard	TBD	6.0m		
Rear Yard	TBD	6.4m		
BUILDING HEIGHT				
Height	TBD	15.1m To be confirmed with grading plan		
SUITES				
	Under 50m ² (per floor)	Over 50m ² (per floor)	Total number of suites per floor	Total
1st & 2nd Floors	n/a	11	11	12 x 2 floors = 22 suites
3rd Floor	n/a	10	10	10 x 1 floors = 10 suites
PARKING	REQUIRED	PROVIDED		
Residential Suites	Suites over 50m ² 1 space/suite 32suites/1 =32 spaces Total Required = 32 spaces	40 underground parking spaces plus 5 visitor spaces		

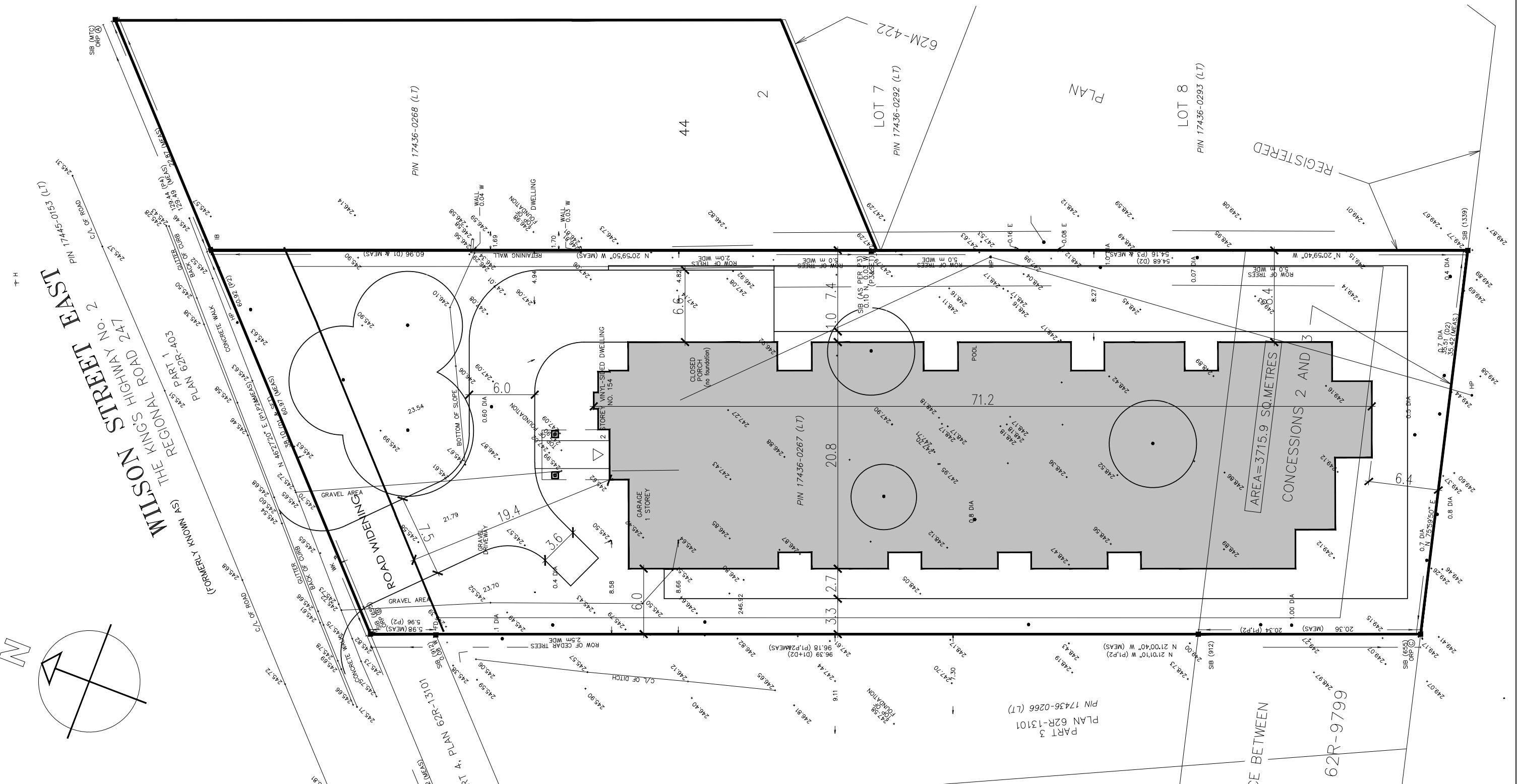
Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
N.T.S.
DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED
244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
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COVER SITE STATISTICS

JOB No.	DWG. No.
17.079	A1.0



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES

154 WILSON STREET EAST
ANCASTER, ON

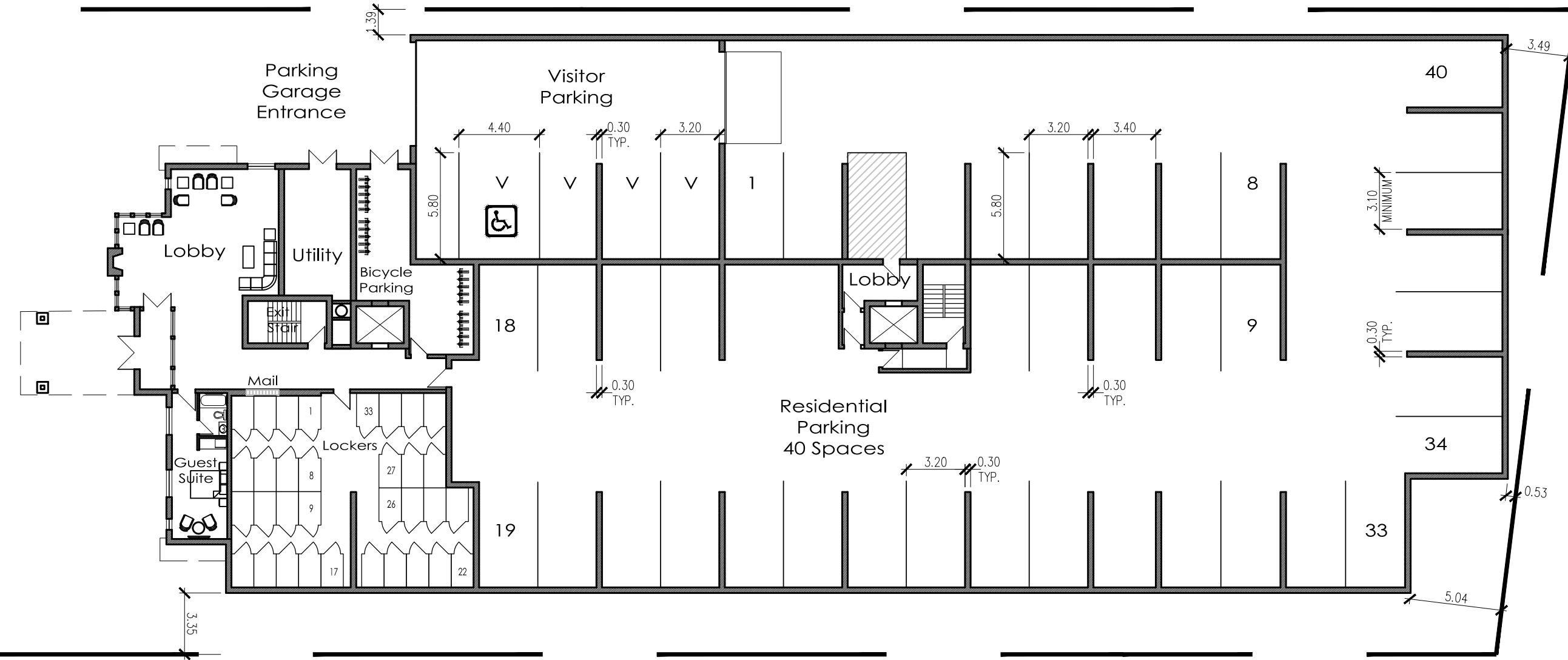
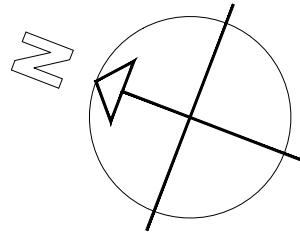
SCALE:
N.T.

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SITE PLAN



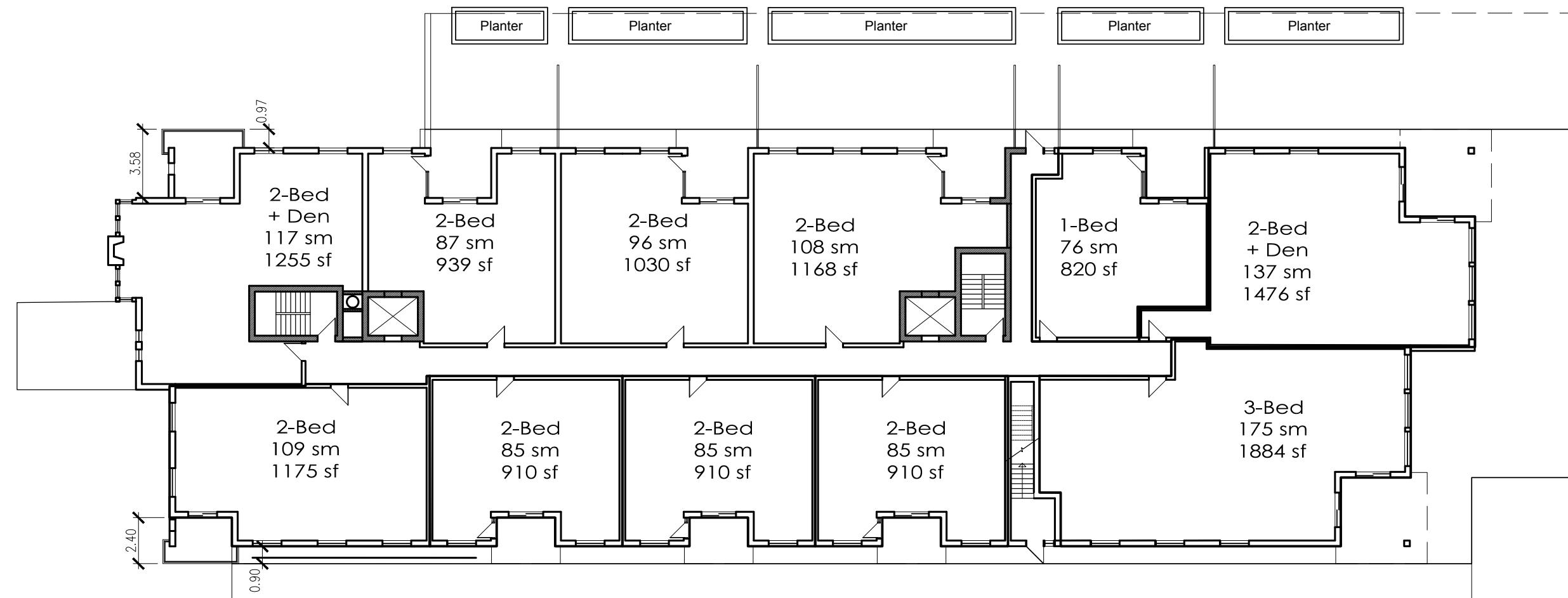
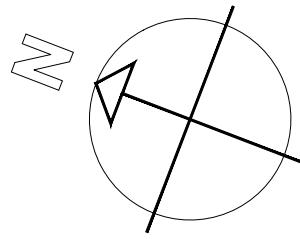
PARKING LEVEL

Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:250
DATE:
NOV 2017

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PARKING LEVEL	
JOB No.	DWG. No.
17.079	A2.01



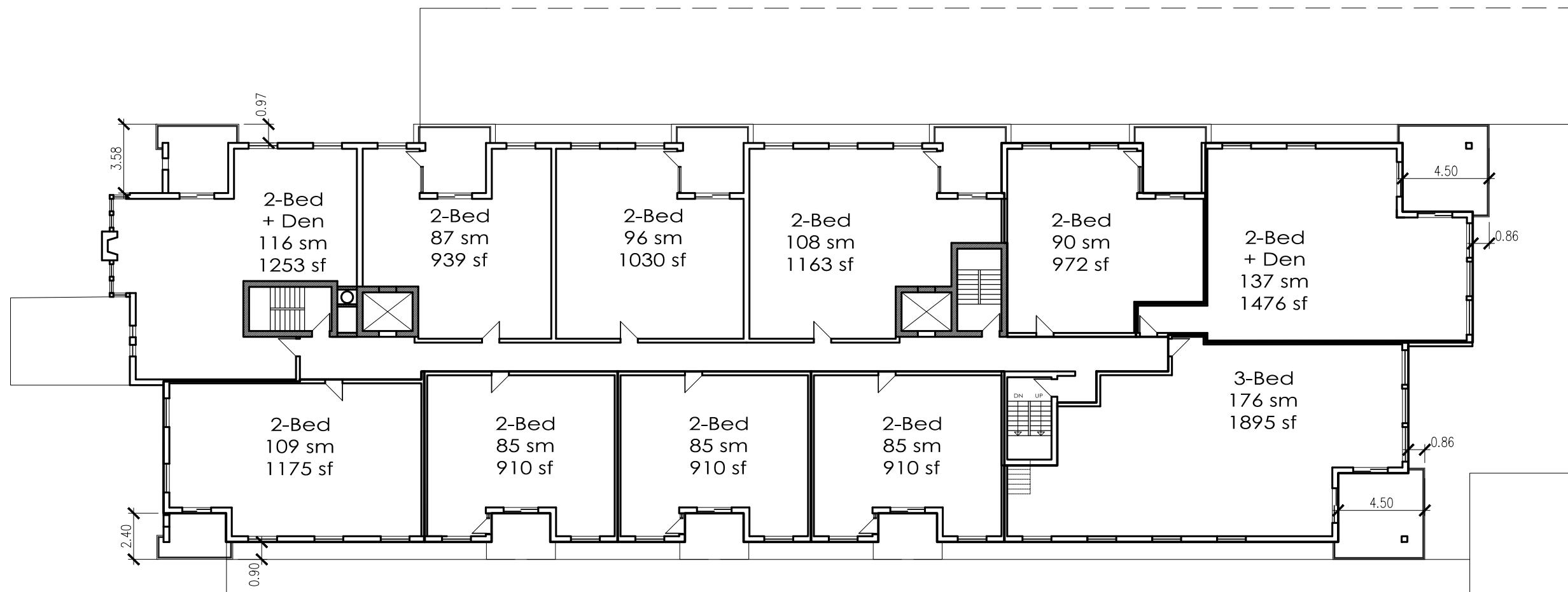
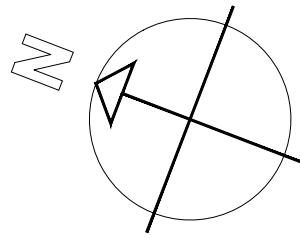
FIRST LEVEL
11 SUITES

Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:250
DATE:
NOV 2017

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FIRST LEVEL
JOB No. 17.079 DWG. No. 2.1



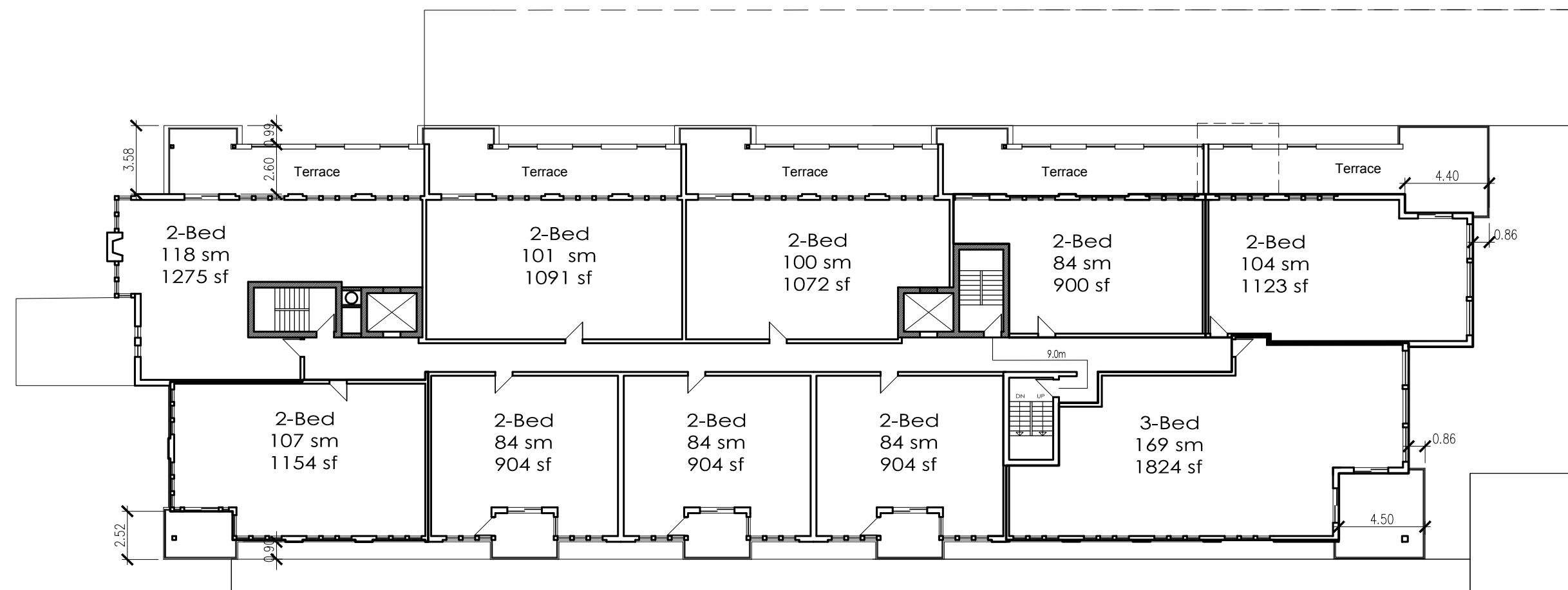
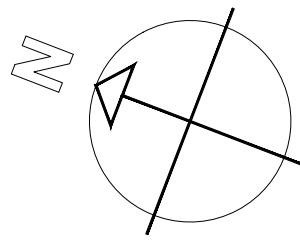
Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
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SECOND
LEVEL
JOB No. 17.079 DWG. No. A2.2



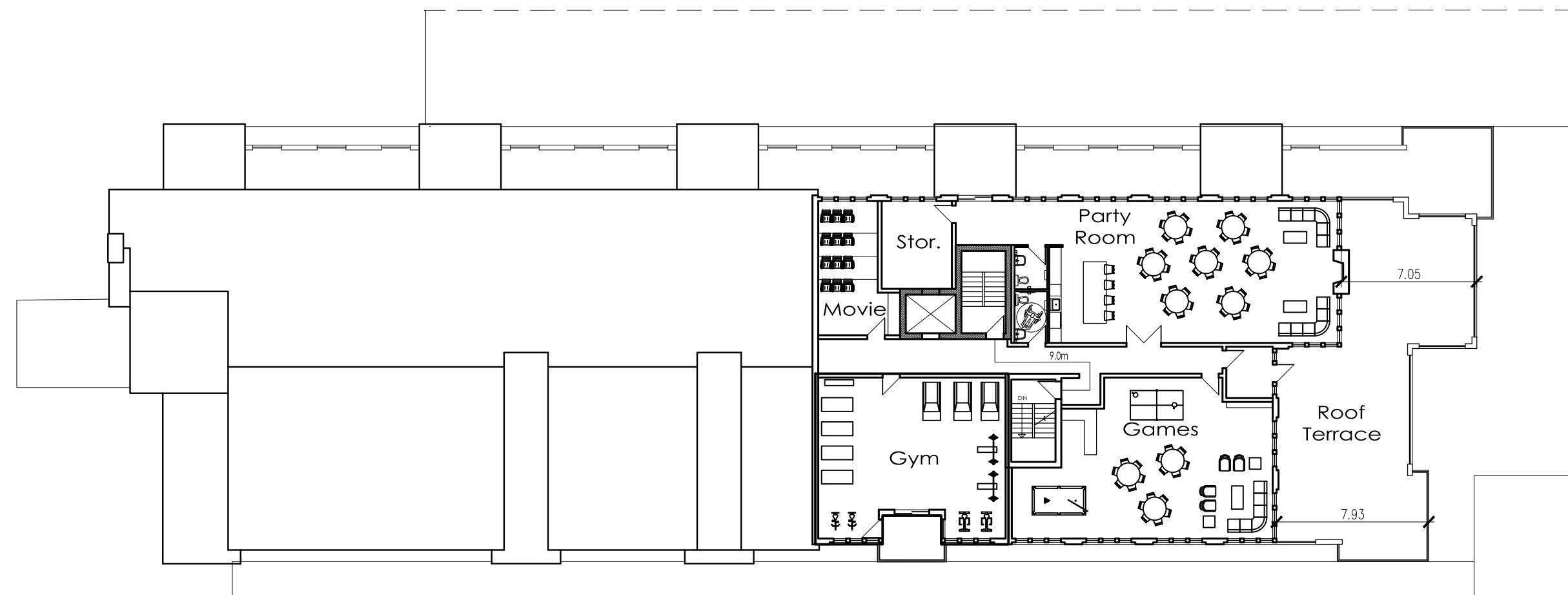
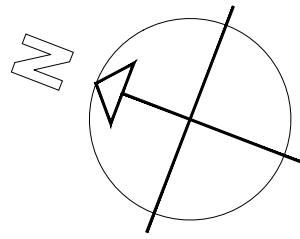
THIRD LEVEL
10 SUITES

Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:250
DATE:
NOV 2017

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THIRD LEVEL
JOB No. 17.079 DWG. No. A2.2



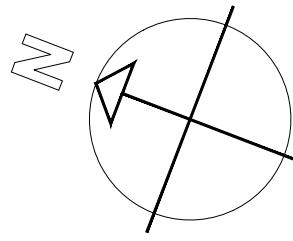
FOURTH LEVEL AMENITIES

Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:250
DATE:
NOV 2017

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FOURTH
LEVEL
JOB No. 17.079 DWG. No. A2.3



ROOF PLAN

Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:250
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ROOF PLAN
JOB No. 17.079 DWG. No. A2.3



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
N.T.S
DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED
244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
T: 905.522.6165 • F: 905.522.2209 • E: information@lintack.com
www.lintack.com

**NORTH
ELEVATION**
JOB No. 17.079 DWG. No. A3.1



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
N.T.S

DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED

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T: 905.522.6165 • F: 905.522.2209 • E: information@lintack.com
www.lintack.com

**EAST
ELEVATION**

JOB No.	DWG. No.
17.079	A3.2



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
N.T.S
DATE:
NOV 2017

LINTACK ARCHITECTS
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244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
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www.lintack.com

**SOUTH
ELEVATION**
JOB No. 17.079 DWG. No. A3.3

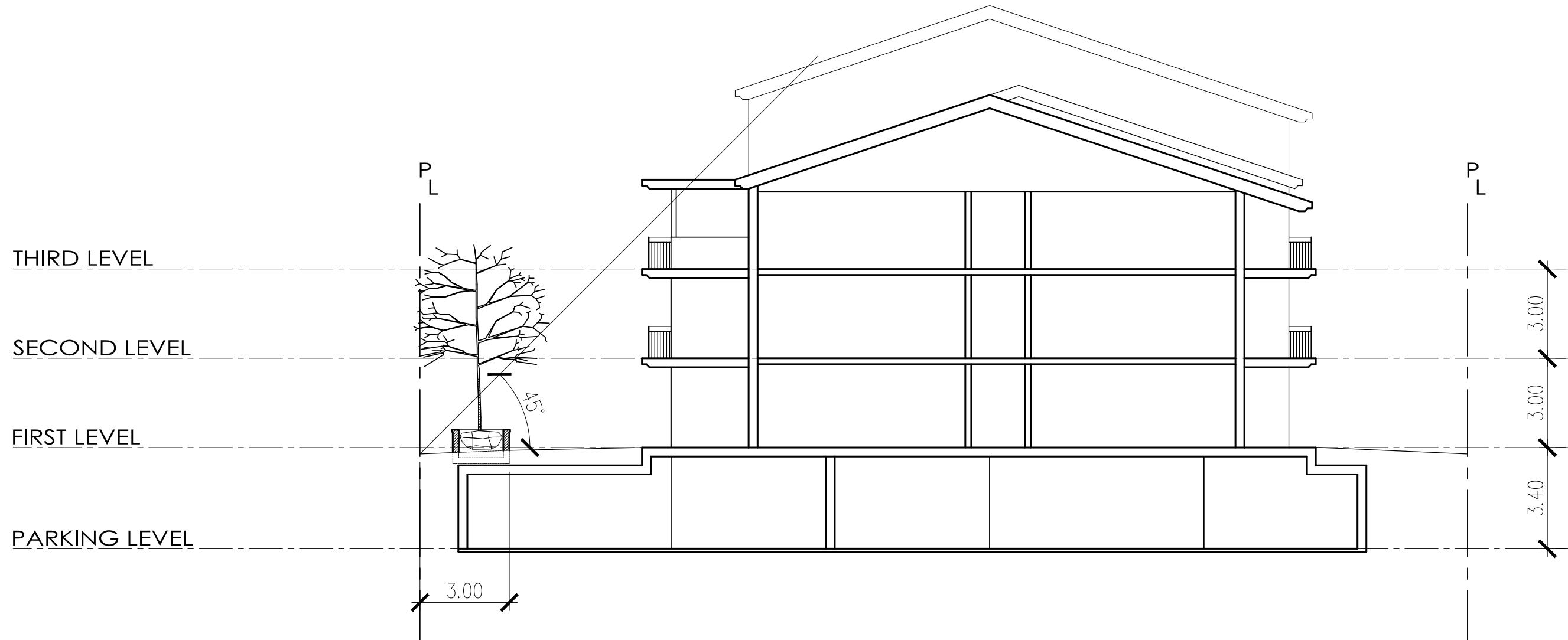


Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
N.T.S
DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED
244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
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www.lintack.com

WEST
ELEVATION
JOB No. 17.079 DWG. No. A3.4



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
1:150
DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED
244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
T: 905.522.6165 • F: 905.522.2209 • E: information@lintack.com
www.lintack.com

SECTION
JOB No. 17.079 DWG. No. A3.5



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
NTS

DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED

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www.lintack.com

**VIEW FROM
WILSON STREET**

JOB No.	DWG. No.
17.079	A4.1



Proposed:
RESIDENTIAL CONCEPT
VALERY HOMES
154 WILSON STREET EAST
ANCASTER, ON

SCALE:
NTS

DATE:
NOV 2017

LINTACK ARCHITECTS
INCORPORATED

244 JAMES STREET SOUTH, HAMILTON, ONTARIO, L8P 3B3
T: 905.522.6165 • F: 905.522.2209 • E: information@lintack.com
www.lintack.com

VIEW FROM
GOLF COURSE

JOB No.	DWG. No.
17.079	A4.2

Appendix B - Existing Traffic Data

City of Hamilton

Intersection:
Direction:
Road Condition: Dry
Comments:

Wilson St
(East/West)

T U R N I N G M O V E M E N T F L O W C H A R T

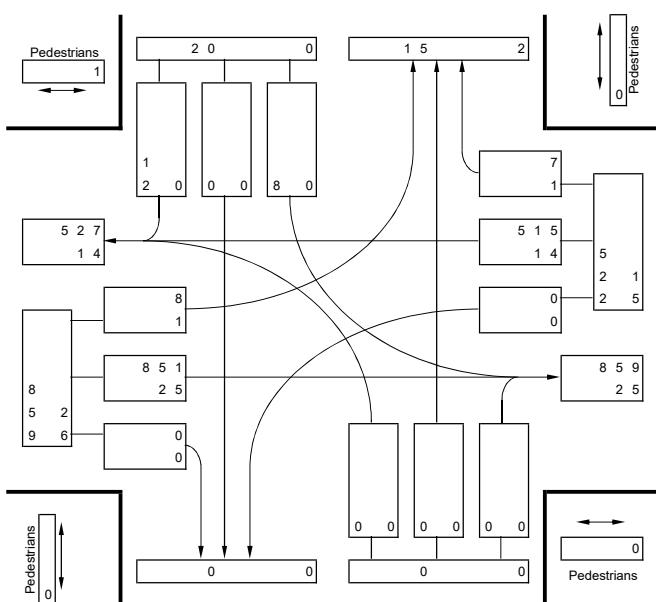
at
Dalley Dr
(North/South)

Weather: Cloudy

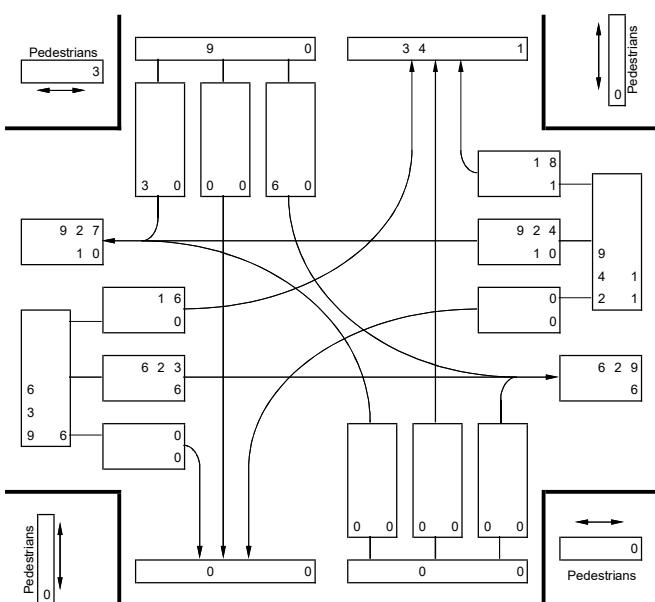
Total Vehicles: 9,385
M.V.E./Year: 6.158
AWDT Factor: 1.93

Loc. Code: 119

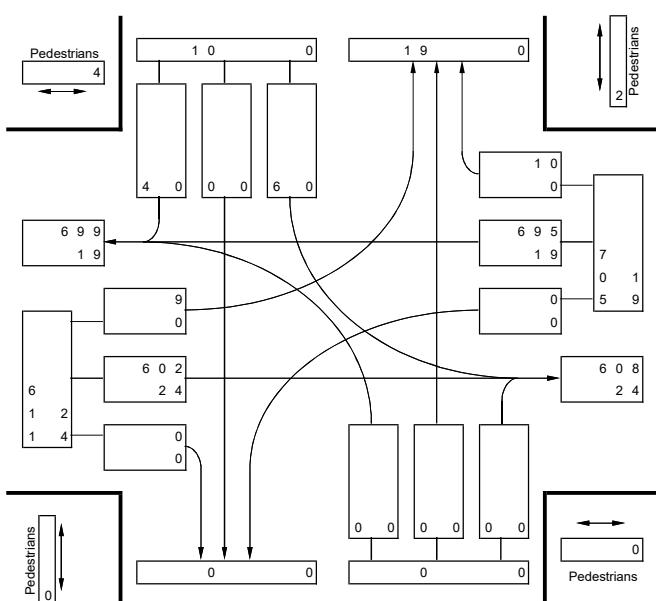
Date: Thursday
Oct 12, 2017
Period: 7 hours



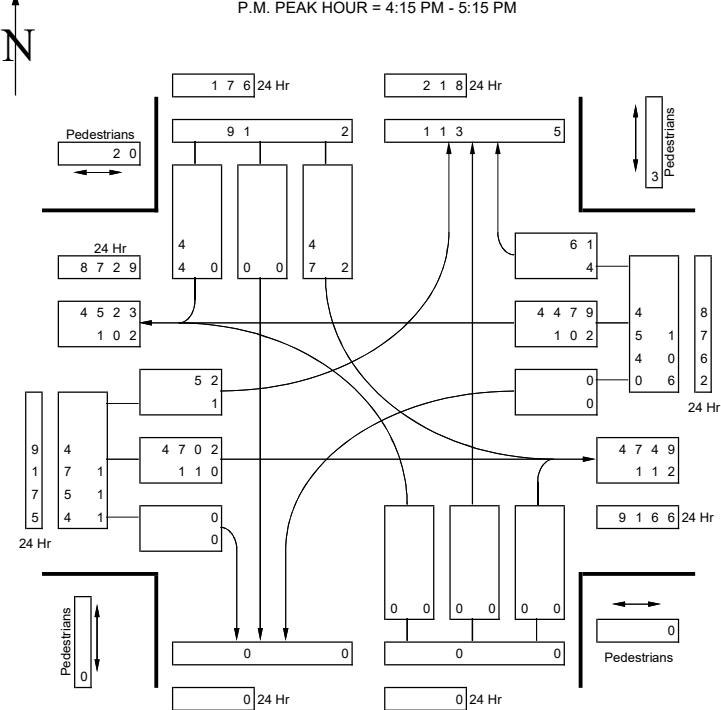
A.M. PEAK HOUR = 8:15 AM - 9:15 AM



P.M. PEAK HOUR = 4:15 PM - 5:15 PM



NORMAL HOUR = 2:30 PM - 3:30 PM



7 Hr & 24 Hr TOTAL VOLUMES

Appendix C - Existing Traffic Level of Service Calculations

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↖		↖ ↗	
Traffic Volume (veh/h)	8	851	515	7	8	12
Future Volume (Veh/h)	8	851	515	7	8	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	925	560	8	9	13
Pedestrians					1	
Lane Width (m)					3.7	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	569			1508	565	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	569			1508	565	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	99			93	98	
cM capacity (veh/h)	1002			132	524	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	9	925	568	22		
Volume Left	9	0	0	9		
Volume Right	0	0	8	13		
cSH	1002	1700	1700	236		
Volume to Capacity	0.01	0.54	0.33	0.09		
Queue Length 95th (m)	0.2	0.0	0.0	2.3		
Control Delay (s)	8.6	0.0	0.0	21.8		
Lane LOS	A			C		
Approach Delay (s)	0.1		0.0	21.8		
Approach LOS				C		
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		54.8%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	623	924	18	6	3
Future Volume (Veh/h)	16	623	924	18	6	3
Sign Control	Free	Free		Stop		
Grade	0%	0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	677	1004	20	7	3
Pedestrians				3		
Lane Width (m)				3.7		
Walking Speed (m/s)				1.1		
Percent Blockage				0		
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1027			1728	1017	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1027			1728	1017	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	97			93	99	
cM capacity (veh/h)	674			95	288	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	17	677	1024	10		
Volume Left	17	0	0	7		
Volume Right	0	0	20	3		
cSH	674	1700	1700	118		
Volume to Capacity	0.03	0.40	0.60	0.08		
Queue Length 95th (m)	0.6	0.0	0.0	2.1		
Control Delay (s)	10.5	0.0	0.0	38.2		
Lane LOS	B			E		
Approach Delay (s)	0.3		0.0	38.2		
Approach LOS				E		
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		59.7%		ICU Level of Service		B
Analysis Period (min)		15				

Appendix D – Future Background Level of Service Calculations

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑		↑	
Traffic Volume (veh/h)	8	940	569	7	8	12
Future Volume (Veh/h)	8	940	569	7	8	12
Sign Control	Free	Free		Stop		
Grade	0%	0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	1022	618	8	9	13
Pedestrians					1	
Lane Width (m)				3.7		
Walking Speed (m/s)				1.1		
Percent Blockage				0		
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	627			1663	623	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	627			1663	623	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	99			91	97	
cM capacity (veh/h)	954			106	486	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	9	1022	626	22		
Volume Left	9	0	0	9		
Volume Right	0	0	8	13		
cSH	954	1700	1700	196		
Volume to Capacity	0.01	0.60	0.37	0.11		
Queue Length 95th (m)	0.2	0.0	0.0	2.8		
Control Delay (s)	8.8	0.0	0.0	25.6		
Lane LOS	A			D		
Approach Delay (s)	0.1		0.0	25.6		
Approach LOS				D		
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		59.5%		ICU Level of Service		B
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	688	1020	18	6	3
Future Volume (Veh/h)	16	688	1020	18	6	3
Sign Control	Free	Free		Stop		
Grade	0%	0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	748	1109	20	7	3
Pedestrians				3		
Lane Width (m)				3.7		
Walking Speed (m/s)				1.1		
Percent Blockage				0		
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1132			1904	1122	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1132			1904	1122	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	97			90	99	
cM capacity (veh/h)	615			73	250	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	17	748	1129	10		
Volume Left	17	0	0	7		
Volume Right	0	0	20	3		
cSH	615	1700	1700	93		
Volume to Capacity	0.03	0.44	0.66	0.11		
Queue Length 95th (m)	0.6	0.0	0.0	2.7		
Control Delay (s)	11.0	0.0	0.0	48.3		
Lane LOS	B			E		
Approach Delay (s)	0.2		0.0	48.3		
Approach LOS				E		
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization	64.8%		ICU Level of Service		C	
Analysis Period (min)		15				

Appendix E – Future Total Level of Service Calculations

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018

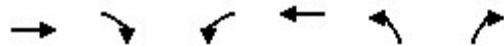


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑		↑	
Traffic Volume (veh/h)	8	949	572	7	8	12
Future Volume (Veh/h)	8	949	572	7	8	12
Sign Control	Free	Free		Stop		
Grade	0%	0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	1032	622	8	9	13
Pedestrians					1	
Lane Width (m)				3.7		
Walking Speed (m/s)				1.1		
Percent Blockage				0		
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	631			1677	627	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	631			1677	627	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	99			91	97	
cM capacity (veh/h)	951			104	483	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	9	1032	630	22		
Volume Left	9	0	0	9		
Volume Right	0	0	8	13		
cSH	951	1700	1700	193		
Volume to Capacity	0.01	0.61	0.37	0.11		
Queue Length 95th (m)	0.2	0.0	0.0	2.9		
Control Delay (s)	8.8	0.0	0.0	26.0		
Lane LOS	A			D		
Approach Delay (s)	0.1		0.0	26.0		
Approach LOS				D		
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		59.9%		ICU Level of Service		B
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Wilson Street East

7/10/2018



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	1	1	1	1	1
Traffic Volume (veh/h)	948	1	3	581	3	9
Future Volume (Veh/h)	948	1	3	581	3	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1030	1	3	632	3	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume		1031		1668	1030	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		1031		1668	1030	
tC, single (s)		4.1		6.4	6.2	
tC, 2 stage (s)						
tF (s)		2.2		3.5	3.3	
p0 queue free %		100		97	96	
cM capacity (veh/h)		674		105	283	
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	1031	635	13			
Volume Left	0	3	3			
Volume Right	1	0	10			
cSH	1700	674	204			
Volume to Capacity	0.61	0.00	0.06			
Queue Length 95th (m)	0.0	0.1	1.5			
Control Delay (s)	0.0	0.1	23.9			
Lane LOS		A	C			
Approach Delay (s)	0.0	0.1	23.9			
Approach LOS			C			
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		60.0%		ICU Level of Service		B
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Wilson Street East & Dalley Drive

7/10/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	693	1028	18	6	3
Future Volume (Veh/h)	16	693	1028	18	6	3
Sign Control	Free	Free		Stop		
Grade	0%	0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	753	1117	20	7	3
Pedestrians				3		
Lane Width (m)				3.7		
Walking Speed (m/s)				1.1		
Percent Blockage				0		
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1140			1917	1130	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1140			1917	1130	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	97			90	99	
cM capacity (veh/h)	611			72	247	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	17	753	1137	10		
Volume Left	17	0	0	7		
Volume Right	0	0	20	3		
cSH	611	1700	1700	91		
Volume to Capacity	0.03	0.44	0.67	0.11		
Queue Length 95th (m)	0.7	0.0	0.0	2.7		
Control Delay (s)	11.1	0.0	0.0	49.2		
Lane LOS	B			E		
Approach Delay (s)	0.2		0.0	49.2		
Approach LOS				E		
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization	65.2%		ICU Level of Service		C	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Wilson Street East

7/10/2018



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (veh/h)	704	5	8	1023	3	5
Future Volume (Veh/h)	704	5	8	1023	3	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	765	5	9	1112	3	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume		770		1898	768	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		770		1898	768	
tC, single (s)		4.1		6.4	6.2	
tC, 2 stage (s)						
tF (s)		2.2		3.5	3.3	
p0 queue free %		99		96	99	
cM capacity (veh/h)		844		75	402	
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	770	1121	8			
Volume Left	0	9	3			
Volume Right	5	0	5			
cSH	1700	844	153			
Volume to Capacity	0.45	0.01	0.05			
Queue Length 95th (m)	0.0	0.2	1.2			
Control Delay (s)	0.0	0.4	29.8			
Lane LOS		A	D			
Approach Delay (s)	0.0	0.4	29.8			
Approach LOS			D			
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		70.2%		ICU Level of Service		C
Analysis Period (min)		15				

Appendix F - Transit

SATURDAY SCHEDULE - Westbound

TIMEPOINTS	A	B	C	D	E	F	G
Meadowlands Terminal	9:08	9:15	9:19	---	9:21	---	9:25
Wilson & Rousseaux				Wilson & Fiddler's Green	Green		
Wilson & Fiddler's Green				Wilson & Garden	Green		
Fiddler's Green & Garden				Wilson & Amberly	Garden		
Wilson & Amberly				Jerseyville & Shaver	Shaver		
Jerseyville & Shaver				Wilson & Garner	Garner		
Wilson & Garner							

SATURDAY SCHEDULE - Eastbound

TIMEPOINTS	G	F	E	D	C	B	A
Wilson & Garner	8:25	8:30	8:35	8:40	8:42	8:47	8:56
Jerseyville & Shaver				Wilson & Fiddler's Green	Green		
Wilson & Amberly				Wilson & Garden	Green		
Fiddler's Green & Garden				Wilson & Amberly	Garden		
Wilson & Fiddler's Green				Wilson & Shaver	Shaver		
Wilson & Garden				Wilson & Garner	Garner		
Amberly							
Garden							

ROUTE 16 - ANCASTER ROUTING

AM ROUTE - From Meadowlands to Garner/Wilson

The bus leaves Martindale Cr. and travels south to Golflinks Rd., west on Golflinks Rd., north on McNiven Rd., north-west on Rousseaux St., south-west on Wilson St., south on Shaver Rd. and west on Garner Rd. The recovery point will be north side of Garner Rd. just east of Wilson St.

AM ROUTE - From Garner/Wilson to Meadowlands

The bus leaves Garner Rd. and Wilson St., travels north-east on Wilson St., north on Shaver Rd., east on Jerseyville Rd., south on Meadowbrook Dr., north-east on Wilson St., south-east on Amberly Blvd., south on Fiddler's Green, east on Garden Ave., south on Anson Dr., west on Garner Rd., north on Fiddler's Green, north-east on Wilson St., south-east on Rousseaux St., south on McNiven Rd., east on Golflinks Rd., north on Neville Dr., west on Martindale Cr. The recovery point will be on Martindale Cr. north of Golflinks Rd.

PM ROUTE - From Meadowlands to Garner/Wilson

The bus leaves Martindale Cr. and travels south to Golflinks Rd., west on Golflinks Rd., north on McNiven Rd., north-west on Rousseaux St., south-west on Wilson St., south on Fiddler's Green, east on Garden Ave., south on Anson Dr., west on Garner Rd., north on Fiddler's Green, north-west on Amberly Blvd., south-west on Wilson St., north on Meadowbrook Dr., west on Jerseyville Rd., south on Shaver Rd. and west on Garner Rd. The recovery point will be north side of Garner Rd. just east of Wilson St.

PM ROUTE - From Garner/Wilson to Meadowlands

The bus leaves Garner Rd. and Wilson St. and travels north-east on Wilson St., south-east on Rousseaux St., south on McNiven Rd., east on Golflinks Rd., north on Neville Dr., west on Martindale Cr. The recovery point will be on Martindale Cr. north of Golflinks Rd.

Most Weekday and all Saturday trips are interlined with the 43-Stone Church route leaving Meadowlands.



Sept. 4,
2016

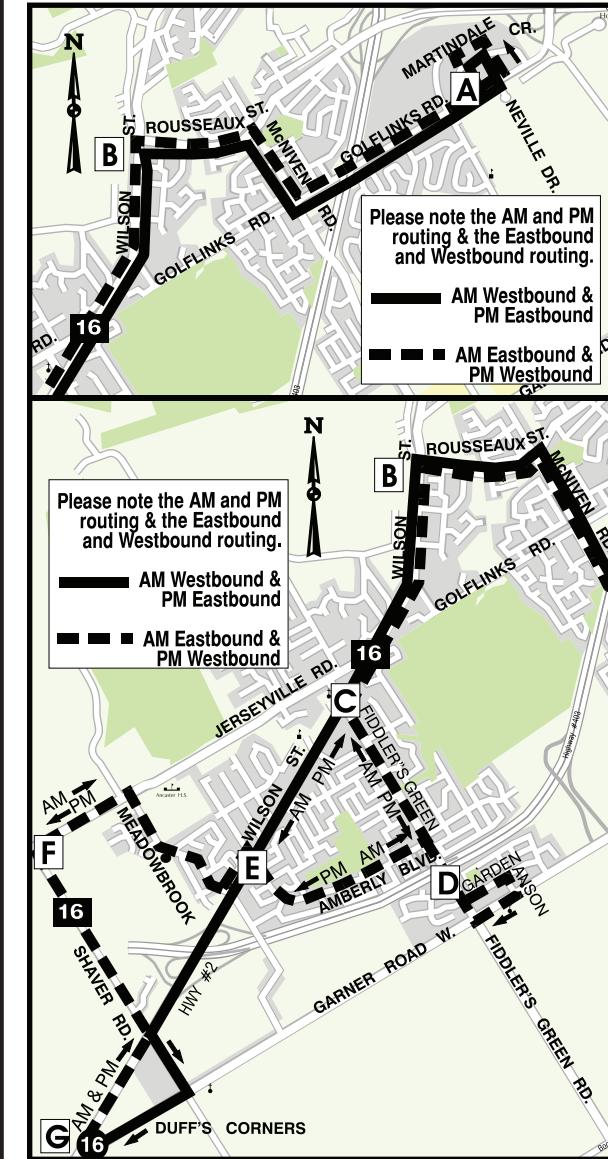
16

ANCASTER



Full
Service

No Sunday or Holiday Service



For more information, call
Bus Check at 905.527.4441
or click onto
Bus Web www.hamilton.ca/hsr



Hamilton

WEEKDAY SCHEDULE - Westbound

TIMEPOINTS	A	B	C	D	E	F	G
Meadowlands Terminal	Wilson & Rousseaux	Wilson & Fiddler's Green	Fiddler's Green & Garden	Wilson & Amberly	Jerseyville & Shaver	Wilson & Garner	
5 am	5:57	6:04	6:08	----	6:10	----	6:14
6 am	6:27	6:34	6:38	----	6:40	----	6:44
	6:57	7:04	7:08	----	7:10	----	7:14
7 am	7:27	7:34	7:38	----	7:40	----	7:44
	7:57	8:04	8:08	----	8:10	----	8:14
8 am	8:27	8:34	8:38	----	8:40	----	8:44
	9:00	9:07	9:11	----	9:13	----	9:17
9 am	9:32	9:39	9:43	----	9:45	----	9:49
10 am	10:02	10:09	10:13	----	10:15	----	10:19
	10:32	10:39	10:43	----	10:45	----	10:49
11 am	11:32	11:39	11:43	----	11:45	----	11:49
12 pm	12:32	12:39	12:43	12:48	12:52	12:56	1:01
1 pm	1:32	1:39	1:43	1:48	1:52	1:56	2:01
2 pm	2:33	2:40	2:44	2:49	2:53	2:57	3:02
3 pm	3:03	3:10	3:14	3:19	3:23	3:27	3:32
	3:33	3:40	3:44	3:49	3:53	3:57	4:02
4 pm	4:03	4:10	4:14	4:19	4:23	4:27	4:32
	4:33	4:40	4:44	4:49	4:53	4:57	5:02
5 pm	5:03	5:10	5:14	5:19	5:23	5:27	5:32
	5:33	5:40	5:44	5:49	5:53	5:57	6:02
6 pm	6:03	6:10	6:14	6:19	6:23	6:27	6:32
* 6:33	6:40	6:44	6:49	6:53	6:57	7:02	
7 pm	7:03	7:10	7:14	7:19	7:23	7:27	7:32
	7:55	8:02	8:06	8:11	8:15	8:19	8:24
8 pm	8:55	9:02	9:06	9:11	9:15	9:19	9:24

HSR INFORMATION

Important Telephone Numbers

HSR Information	905.527.4441
HSR Administration	905.528.4200
Accessible Transportation	905.528.4200
HSR website	www.hamilton.ca/hsr

The H.S.R does not take responsibility for errors in this document, for damages or inconveniences caused by delayed schedules or failures to make connections.

WEEKDAY SCHEDULE - Eastbound

TIMEPOINTS	G	F	E	D	C	B	A
Meadowlands Terminal	Wilson & Garner	Jerseyville & Shaver	Wilson & Amberly	Fiddler's Green & Garden	Wilson & Fiddler's Green	Wilson & Rousseaux	Meadowlands Terminal
5 am	5:03	5:08	5:13	5:18	5:20	5:25	5:34
	5:33	5:38	5:43	5:48	5:50	5:55	6:04
6 am	6:03	6:08	6:13	6:18	6:20	6:25	6:34
	6:28	6:33	6:38	6:43	6:45	6:50	6:59
	6:58	7:03	7:08	7:13	7:15	7:20	7:29
7 am	7:28	7:33	7:38	7:43	7:45	7:50	7:59
	7:58	8:03	8:08	8:13	8:15	8:20	8:29
8 am	8:28	8:33	8:38	8:43	8:45	8:50	8:59
	8:58	9:03	9:08	9:13	9:15	9:20	9:29
9 am	9:20	9:25	9:30	9:35	9:37	9:42	9:51
	9:50	9:55	10:00	10:05	10:07	10:12	10:21
10 am	10:50	10:55	11:00	11:05	11:07	11:12	11:21
11 am	11:50	11:55	12:00	12:05	12:07	12:12	12:21
1 pm	1:02	----	1:06	----	1:08	1:12	1:21
2 pm	2:02	----	2:06	----	2:08	2:12	2:21
3 pm	3:02	----	3:06	----	3:08	3:12	3:21
	3:32	----	3:36	----	3:38	3:42	3:51
4 pm	4:02	----	4:06	----	4:08	4:12	4:21
	4:32	----	4:36	----	4:38	4:42	4:51
5 pm	5:02	----	5:06	----	5:08	5:12	5:21
	5:32	----	5:36	----	5:38	5:42	5:51
6 pm	6:05	----	6:09	----	6:11	6:15	6:24*
	6:35	----	6:39	----	6:41	6:45	6:54*
7 pm	7:35	----	7:39	----	7:41	7:45	7:53
8 pm	8:35	----	8:39	----	8:41	8:45	8:53
9 pm	9:30	----	9:34	----	9:36	9:40	9:48

All trips are interlined with the
43-Stone Church route
except for those marked *

CHRISTMAS SERVICE

During the period between Christmas Day and New Year's Day, the HSR usually operates on a modified schedule on selected days. Some routes do not operate at all. Check with our Information Clerks at 905.527.4441 or our website www.hamilton.ca/hsr.

BUS STOP NUMBERS

EASTBOUND	WESTBOUND
Garner At Duff's Corners	1427 Meadowlands Terminal
Wilson At McClure	1638 Platform 3
At 1060 Wilson	2655 2470 Golf Links At Legend
Shaver At Westview	1440 2471 Golf Links Opp. Kitty Murray
Shaver Opposite Sumac	1441 2458 Golf Links At Onondaga
Shaver At Jerseyville	1441 2458 Golf Links At McNiven
Jerseyville At Stevenson	1442 2668 McNiven At Tomahawk
Jerseyville At Meadowbrook	1442 2668 McNiven At Mohawk
Meadowbrook At Morwick	1443 2669 Rousseaux Opp. Academy
Meadowbrook At Tranquility	1443 2610 Wilson At Old Dundas
Meadowbrook At Galley	1444 2610 Wilson Opposite Academy
Meadowbrook At Speers	1444 2611 Wilson At Sulphur Spring
Wilson At Hamilton	2656 2611 Wilson Opposite Halson
Wilson At Amberly	2656 2612 Wilson At Dalley
Wilson Opposite Central	2633 2613 Wilson At Jerseyville
Wilson At Seminole	2633 2615 Wilson At Fiddlers Green (NE)
Wilson At Todd	2634 2617 Wilson At Fiddlers Green (NW)
At 54 Wilson	2634 2617 At 35 Wilson
Amberly At Sunnymeade	2621 2618 Wilson At Dunham
Amberly At Melanie	2621 2618 Wilson Opposite Seminole
Amberly At Cottingham	2622 2618 Wilson At Central
Amberly At Fiddlers Green	2622 2616 Fiddler's Green At Gilbert
Fiddler's Green Op. Enmore	2623 2616 Fiddler's Green At Oakley
Anson At Garner	2624 2623 Fiddler's Green Opp. Enmore
Garner At Fiddler's Green	4484 2624 Anson At Garner
Fiddler's Green At Garden	2626 2624 Garner At Fiddler's Green
Fiddler's Green At Enmore	2627 2626 Fiddler's Green At Garden
Fiddler's Green Opp. Oakley	2628 2627 Fiddler's Green At Enmore
Fiddler's Green Opp. Gilbert	2628 2630 Amberly Opp. Bloomsbury
Fiddler's Green At Wilson	2628 2631 Amberly At Leith Court
Wilson At Fiddlers Green	2635 2631 Amberly Opp. Melanie
Wilson At St Margaret	2636 2632 Amberly Opp. Chippendale
Wilson At Cameron	2636 2632 Amberly At Wilson Street
Wilson Opposite Dalley	2637 2619 Wilson At Valleyview
Wilson At Halson	2637 2629 Wilson At Meadowbrook
Wilson At Church	2639 2626 Meadowbrook Opp. Speers
Wilson At Academy	2638 2626 Meadowbrook Opp. Galley
Wilson At Rousseaux	2638 2626 Meadowbrook Opp. Tranquility
Rousseaux At Wilson	2658 1426 Meadowbrook Opp. Morwick
Rousseaux At Academy	2658 1424 Jerseyville At Martin
Mohawk At McNiven	2659 1424 Jerseyville Opp. Stevenson
McNiven At Orton	2660 1424 Jerseyville Opp. Shaver
McNiven At Golf Links	2660 1423 Shaver Opposite Morwick
Golf Links Opp. Onondaga	2461 1422 Shaver At Wilson
Golf Links At Kitty Murray	2461 1428 Shaver At Wilson
Golf Links At Meadowlands	2461 1428 Shaver Opposite Liddycoat
Golf Links Opp. Martindale	2474 1428 Shaver At Garner
Neville At Martindale	2474 1429 Garner At Walmart
At 122 Martindale	2452 1429 Garner Opp. Rayal Farms
Meadowlands Terminal	
Platform 3	2470