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Provence Orleans Subdivision Phase 6 2065 Portobello Boulevard Ottawa, Ontario

Phase 1 Noise Control Feasibility Study

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**PROVENCE ORLEANS SUBDIVISION PHASE 6
2065 PORTOBELLO BOULEVARD
OTTAWA, ONTARIO**

PHASE 1 NOISE CONTROL FEASIBILITY STUDY

Prepared for:

**Provence Orleans Realty Investments Inc.
c/o The Regional Group**

Prepared by:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario
K2M 1P6

Issued: October 31, 2019

Ref: R-2019-172
Novatech File No. 117155

October 31, 2019

Planning and Growth Management Department
City of Ottawa
110 Laurier Ave. West, 4th Floor
Ottawa, Ontario
K1P 1J1

Attention: Julie Lebrun

**Reference: Legault Lands, 2065 Portobello Boulevard
Noise Impact Assessment Report
Novatech File No.: 117155**

Please find enclosed three (3) copies of the "Phase 1 Noise Control Feasibility Study" for the proposed Provence Orleans Subdivision Phase 6. The site is located in the City of Ottawa and is located adjacent Portobello Boulevard between Scala Avenue and Nantes Street.

The report assesses the environmental impact of noise to the outdoor living areas of the proposed residential development, the feasibility of mitigation measures, and recommend the appropriate noise attenuation requirements. This report is submitted in support of the draft plan of subdivision application.

If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

NOVATECH



Melanie Riddell, P. Eng.
Senior Project Manager | Land Development

Encl.

cc: Erin O'Connor, Provence Orleans Realty Investment Inc. c/o The Regional Group of Companies

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1.0 INTRODUCTION

Novatech has been retained by the Provence Orleans Realty Investment Inc. c/o The Regional Group to prepare a noise feasibility study in support of the proposed Provence Orleans Subdivision Phase 6 draft plan application, located at 2065 Portobello Boulevard in the City of Ottawa. This study was prepared to assess the environmental impact of noise to the outdoor living areas, review the feasibility of various noise mitigation methods, and confirm the noise levels can be reduced to the City of Ottawa approved levels.

The proposed site is located in the east end of the City of Ottawa, southwest of the Innes Road/Trim Road intersection, as shown on the Key Plan (**Figure 1**). The property is bordered by existing residential and school developments. The 11.0ha development consists of a mix of residential and open space uses, including a multi-use lot, 64 singles, and 109 towns, refer to Concept/Phasing Plan (**Figure 2**). It is anticipated the multi-use lot will consist of four six story apartment buildings complete with surface and underground parking and outdoor living areas; however, it will not be discussed in this report, as it will be subject to a separate Site Plan Application.

2.0 BACKGROUND AND REPORT LIMITATIONS

The City of Ottawa's Official Plan (OP) and Environmental Noise Control Guidelines (ENCG) stipulates a detailed noise study shall be prepared when a noise sensitive development is within proximity to surface transportation, stationary, and aircraft noise sources. **Table 2.1** confirms all noise sources considered in this report. All other sources of noise are located beyond the limits of consideration outlined in Part 1, Section 2.1 (When a study is required) of the ENCG.

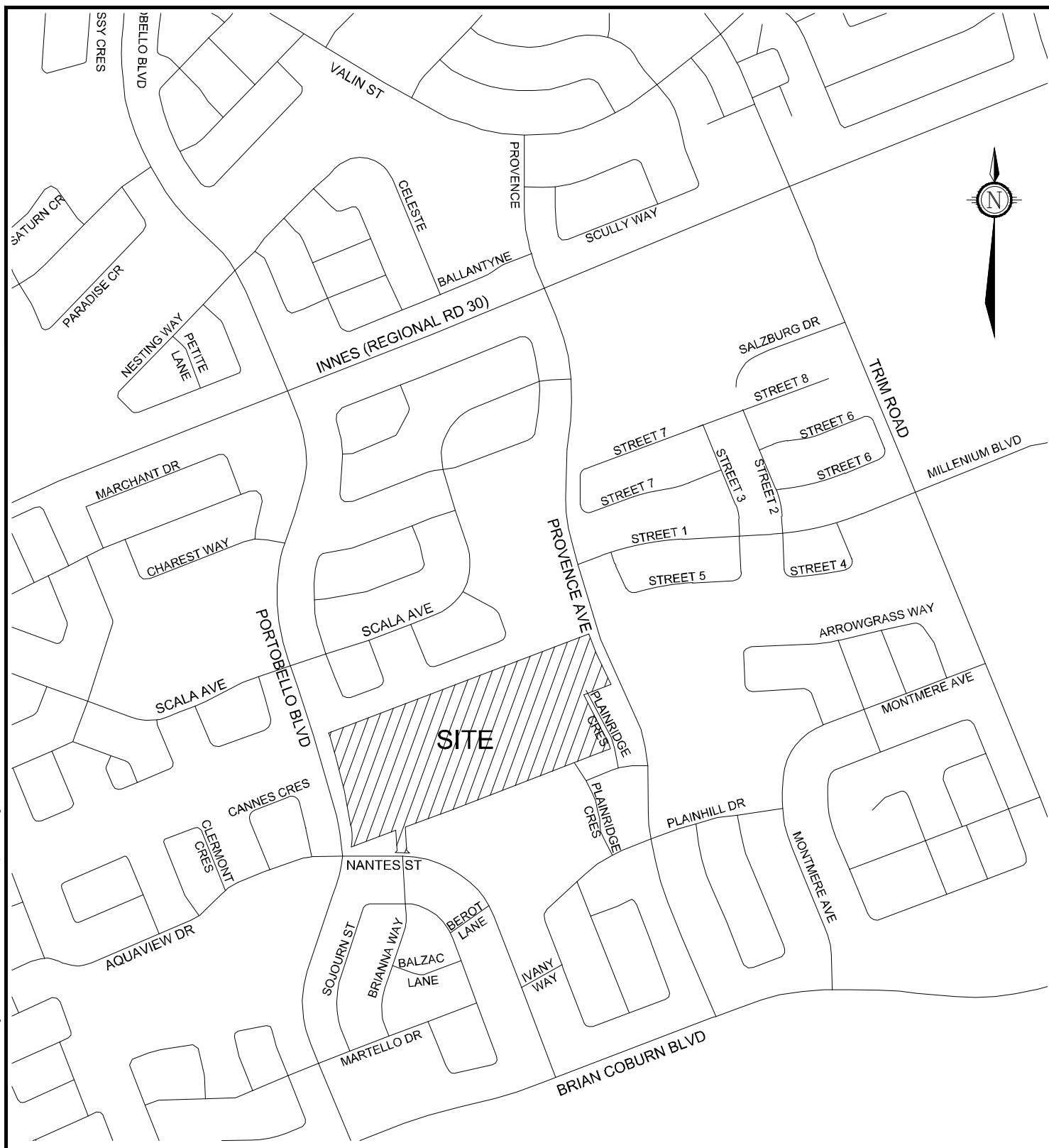
Table 2.1. Road Classification

Street	Noise Source	Road Details		
		Classification	Speed (km/hr)	AADT
Aquaview Drive / Nantes Street	Traffic	2-UCU	50	8,000
Provence Avenue	Traffic	2-UCU	50	8,000
Scala Avenue	Traffic	2-UCU	50	8,000
Portobello Boulevard	Traffic	4-UMCU	50	24,000

In advance of the draft plan submission, the concept plan was reviewed by City staff. At that time alternative site layouts were considered to limit the impact of noise on the units. Where possible window streets have been provided to minimize exposure of outdoor living areas to noise sources.

This report does not consider the proposed transitway, located north of the development, as noise source because, as per Map 5 of the Transportation Master Plan, Rapid Transit and Transit Priority Network – 2031 Affordable Network, the transit way is not included in the City's affordable transportation budget. The design of the transit way will be required to mitigate the

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CITY of OTTAWA
PROVENCE ORLEANS SUBDIVISION
(2128 TRIM ROAD)

KEY PLAN

N.T.S

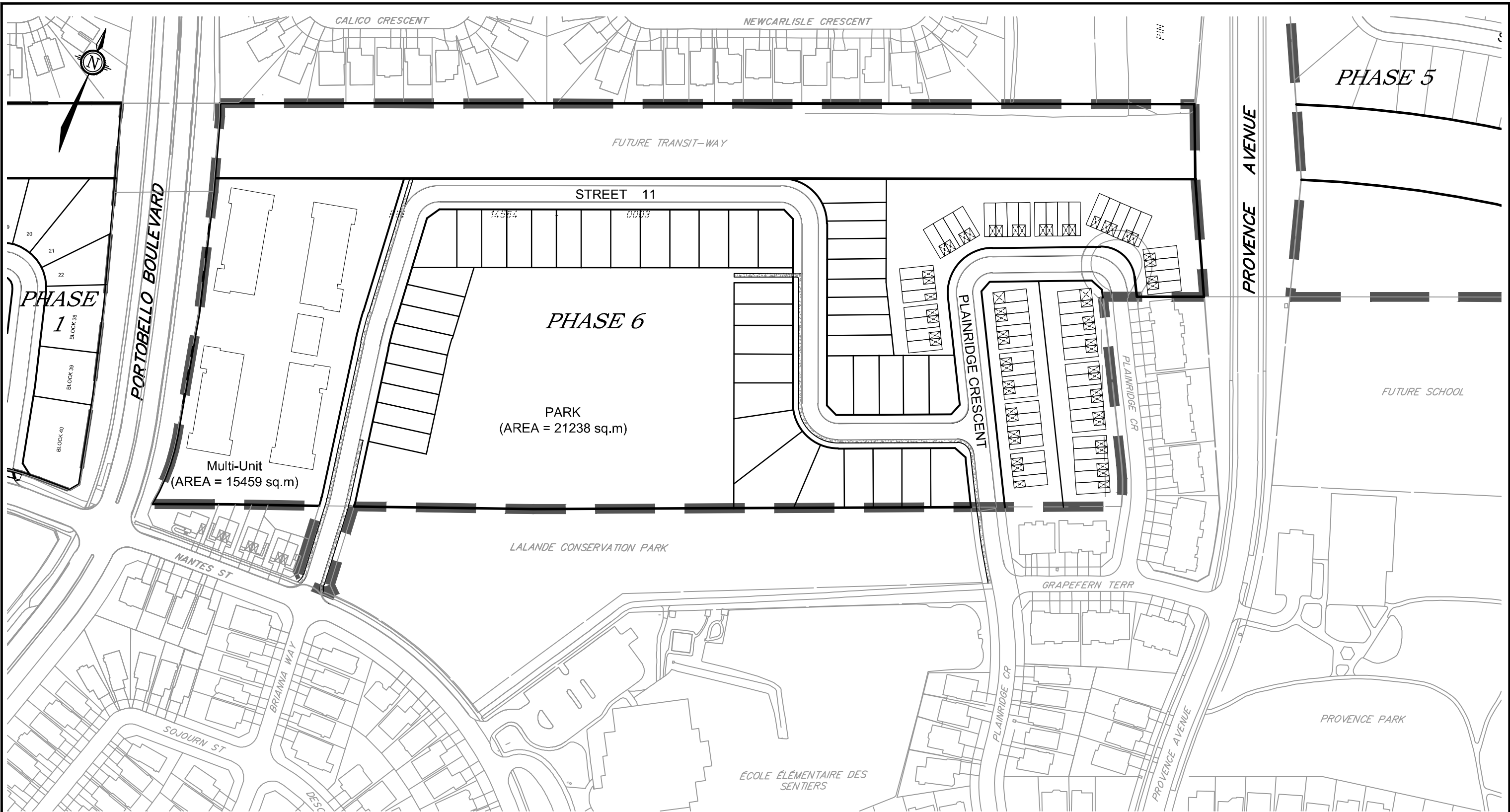
DATE OTC 2019

JOB 117155

FIGURE FIG-1

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PROVENCE ORLEANS SUBDIVISION
(2128 TRIM ROAD)

**PHASE 6 CONCEPT PLAN /
PHASING PLAN**

SCALE 1 : 2000

DATE OCT 2019 JOB 117155 FIGURE FIG-2

increased noise levels on the surrounding residential areas; the preliminary transit design prepared for the Environmental Assessment anticipates noise walls with the transitway.

At this time the layout, grading, servicing, and design of the residential units and the concept of the multi-use blocks have not been finalized and are subject to change due to City comments, market demands, and potential buyer requests; therefore, this report only considers outdoor noise levels. During detailed design this report will to be required to be updated to analyze/mitigate the indoor noise levels and confirm the outdoor noise measures of this report. During detailed design the outdoor noise attenuation measures and window and wall facades will be confirmed.

3.0 CITY OF OTTAWA NOISE CONTROL GUIDELINES

3.1 Sound Level Criteria

The City of Ottawa is concerned with noise from aircraft, roads, transitways, and railways, as expressed in Tables 2.2a: Sound Level Limit for Outdoor Living Areas – Road and Rail, 2.2b: Sound Level Limit for Indoor Living Areas Road and Rail, and 2.2c: Supplementary Sound Level Limits for Indoor Spaces – Road and Rail in Part 1, Section 2.2 Applicable Guidelines for Transportation Noise – Road and Rail of the ENCG. Section 2.2 also states unless noted by the City the development is to be consistent with the NPC-300 guidelines, a noise control guideline prepared by the Ministry of the Environments, Conservation and Parks. Due to the limitations discussed in Section 2.0 of this report only the outdoor living areas are considered. During detailed design the indoor sound levels will be reviewed and addressed.

The maximum permitted sound level for outdoor living areas between 7am and 11pm without informing prospective purchasers of potential noise problems is 55 dBA. If the predicted noise levels are less than 60 dBA noise control measures are not required if the prospective purchasers are notified of potential noise problems.

Outdoor Living Area is defined as:

- **Outdoor Living Area (OLA):** The outdoor amenity area provided for quiet enjoyment of the outdoor environment during the daytime period (i.e., backyards, terraces and patios). OLA noise levels are considered 3.0m from the building façade, 1.5m above grade.

3.2 Noise Attenuation Requirements

When OLA sound levels are predicted to be approximately equal to or less than 55dBa no attenuation measures are required. As the OLA noise levels increase above 55dBa attenuation measures are required to reduce noise levels. When noise attenuation is required, the City of Ottawa typically recommends the following OLA noise measures:

- Adjusting the site layout to maximize noise insensitive lands uses between the noise source and receptor and/or orienting blank walls face towards the noise source
- Constructing noise barriers wall/berms

The site layout was prepared with noise sources in mind. Where possible, window streets have been included and the units have been oriented with side yards exposed to noise sources.

Where the mitigated noise levels exceed the City's criteria, warning clauses will be required to be included in the sales/lease agreements to inform the purchasers of the specific mitigation measures utilized and if the noise is expected to increase in the future, and the requirements to maintain the specified noise mitigation measures. Wall and Window treatments will be confirmed during detailed design.

4.0 PREDICTION AND MITIGATION OF NOISE LEVELS

4.1 Road Traffic

As per Section 3.2, Noise Control Detailed Study Requirements of Part 4, Technical Requirements for Environmental Noise Control Studies and Implementation of the ENCG, traffic is to be based on City (or responsible agency) approved corridor and traffic data. Traffic volumes assumed in this report are based on the City of Ottawa's Appendix B: Table of Traffic and Road Parameters To Be Used For Sound Level, refer to **Appendix A. Table 2.1** confirms the roads, road parameters, and noise sources considered in this report. The previously approved Notting Hill Subdivision Noise Impact Feasibility Report, prepared by Novatech (R-2018-078) for Phases 1-5 of the same development and the Provence Orleans Subdivision (Phase 6) Transportation Impact Assessment, prepared by Novatech (R-2018-168) and submitted under separate cover in support of this application also considered the projected 2025 traffic volumes of the Transportation Impact Assessment Forecasting Report (TIAFR), prepared by Novatech (R-2018-070); however because it consistently predicted noise levels less than the noise levels predicted using the City's criteria, they are not considered in this report.

4.2 Noise Level Analysis

The noise levels for the site were analyzed using version 5.03 of the STAMSON computer noise modelling program. Refer to the Noise Control Plan (Drawing Number 117155-NC-2), located in **Appendix C**, for confirmation of: receiver locations, receiver elevations, and receiver distances to noise sources. The calculated noise levels for all receiver locations generated from STAMSON are listed in **Table 4.2**. Refer to **Appendix B** for all detailed STAMSON noise modelling results.

Table 4.2: Calculated Noise Level Results Based on ENCG

Receiver	Calculated Daytime Noise Level (dBa)	Receiver	Calculated Daytime Noise Level (dBa)
OLA 1	48.4	OLA 8	36.3
OLA 2	46.4	OLA 9	48.1
OLA 3	43.4	OLA 10	58.2*
OLA 4	43.8	OLA 11	42.2
OLA 5	44.0	OLA 12	40.9
OLA 6	43.9	OLA 13	57.7*
OLA 7	40.9	OLA 14	57.6*

* Denotes Attenuated Sound Level in Excess of the Criteria

Road noise was found to exceed the allowable 55dBA noise level criteria for the lots backing onto Provence Avenue, represented by OLA 10 (58.2dBA). OLA 10 is adjacent to existing residential development backing onto Provence Avenue with board on board fencing, along the ROW limits.

Therefore, a noise barrier for the lots represented by OLA 10 is not recommended for the following reasons:

- Section 3.2 (Exceedance of Provincial Criteria) of Part 4 (Technical Requirements for Environmental Noise Control Studies and Implementation) of the City's ENCG permits exceedance up to 5dBA;
- The predicted traffic volumes are likely greater than what will be experienced; and
- The noise barrier does not match the neighborhood aesthetics

Road noise was found to exceed the allowable 55dBA noise level criteria for the lots backing onto Portobello Boulevard, represented by OLA 13 (57.7dBA), and OLA 14 (57.6dBA). At the time of this report the concepts of the lots represented by OLA 13 and OLA 14 are assumed; therefore, all noise mitigation measures must be confirmed during detailed design. This report confirms the predicted noise levels for the lots represented by OLA 13 and OLA 14 is less than 5dBA above the City's criteria, it is anticipated the noise for the lots represented by OLA 13 and OLA 14 can be mitigated to acceptable limits through the City's recommended methods.

It is recommended the City approve the elevated noise levels for the lots represented by OLA 10, OLA 13, and OLA 14.

Due to the predicted unattenuated noise levels being above the City of Ottawa guidelines, it is recommended the following noise clause be registered on title and incorporated into the agreement of sale/lease, of the lots represented by OLA 10, OLA 13, and OLA 14, requiring outdoor noise attenuation:

Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some outdoor activities as the sound levels may exceed the sound level limits of the City of Ottawa.

This development includes trees, shrubs, and board on board fencing to screen the source noise from occupants.

During detailed design the proposed noise attenuation measures to reduce the noise levels outside and inside the units will be confirmed. Once confirmed, the above noted noise clause is to be revised to reference indoor environment noise mitigation measures.

5.0 CONCLUSIONS

This report confirms the predicted outdoor noise levels for the proposed Provence Orleans Subdivision Phase 6 from traffic is in excess of the City of Ottawa's guidelines for the lots represented by OLA 10, OLA 13, and OLA 14. Novatech recommends the following:

- The excessive noise for the lots represented by OLA 10 be permitted because the City's ENCG permits exceedances up to 5dBA, the predicted traffic volumes are likely greater than what will be experienced, and a noise barrier does not match the existing neighborhood aesthetics;
- The inclusion of a noise warning clause registered on title and incorporated into the sales/rental agreements, to inform potential buyers/tenants, for the units represented by OLA 10, OLA 13, and OLA 14, subject to review during detailed design; and

- The report is required to be updated during detailed design to update the analyzed/mitigated indoor noise levels, confirm the outdoor noise levels, finalize warning clauses.

This report is respectfully submitted in support of for approval. Please contact the undersigned should you have questions or require additional information.

NOVATECH

Prepared by:



Mark Bowen, B. Eng.
Project Manager - Land Development

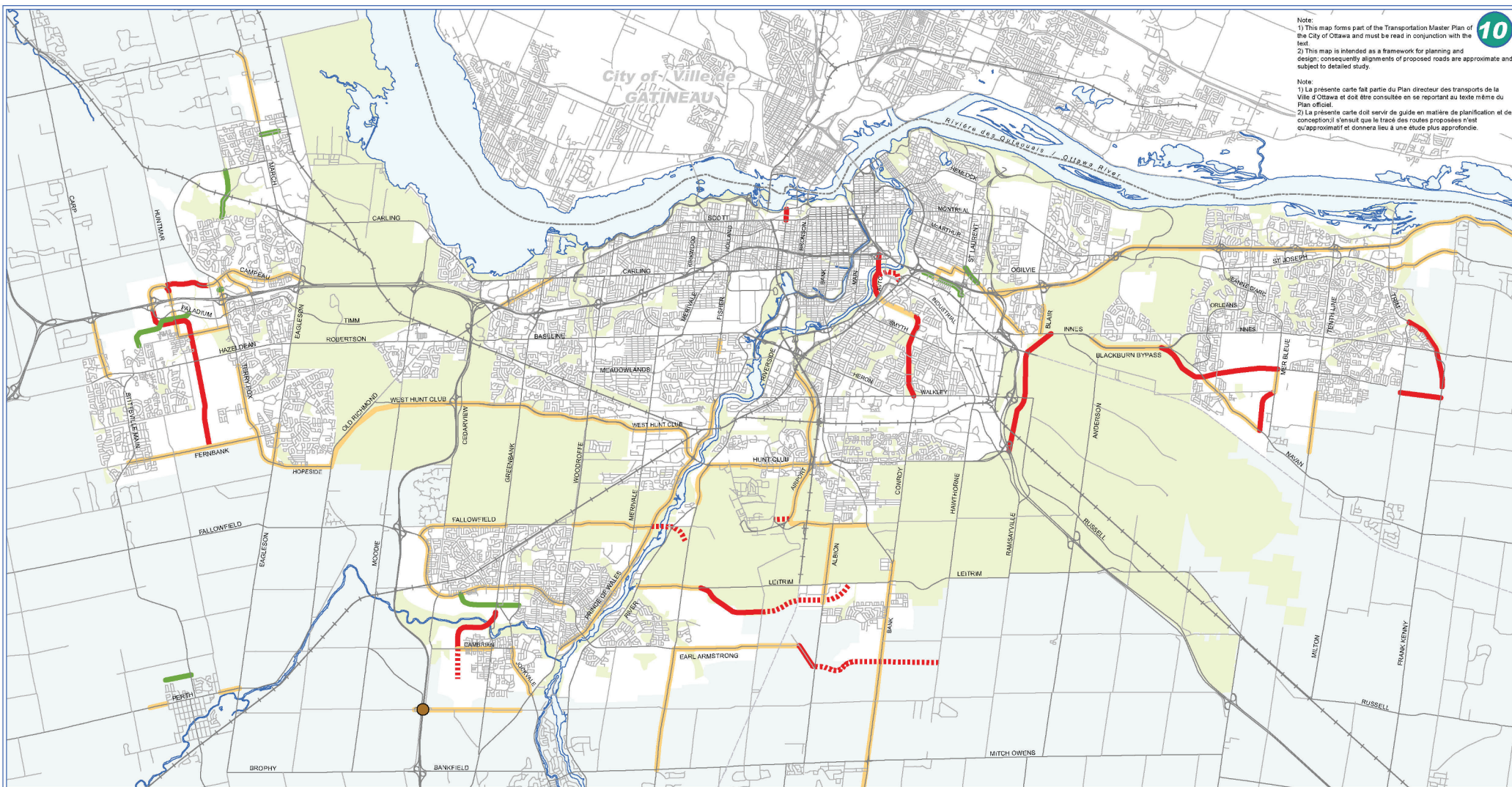
Reviewed by:



Melanie Riddell, P. Eng.
Senior Project Manager – Land Development



Appendix A
Environmental Noise Control Guidelines Excerpts and TIAFR Excerpts




Prepared by: Planning and Growth Management Department.
Mapping & Graphics Unit, 2015 Revision
Préparé par: Service de l'urbanisme et de la gestion de la
croissance, Unité de la cartographie et des graphiques, Révision 2015

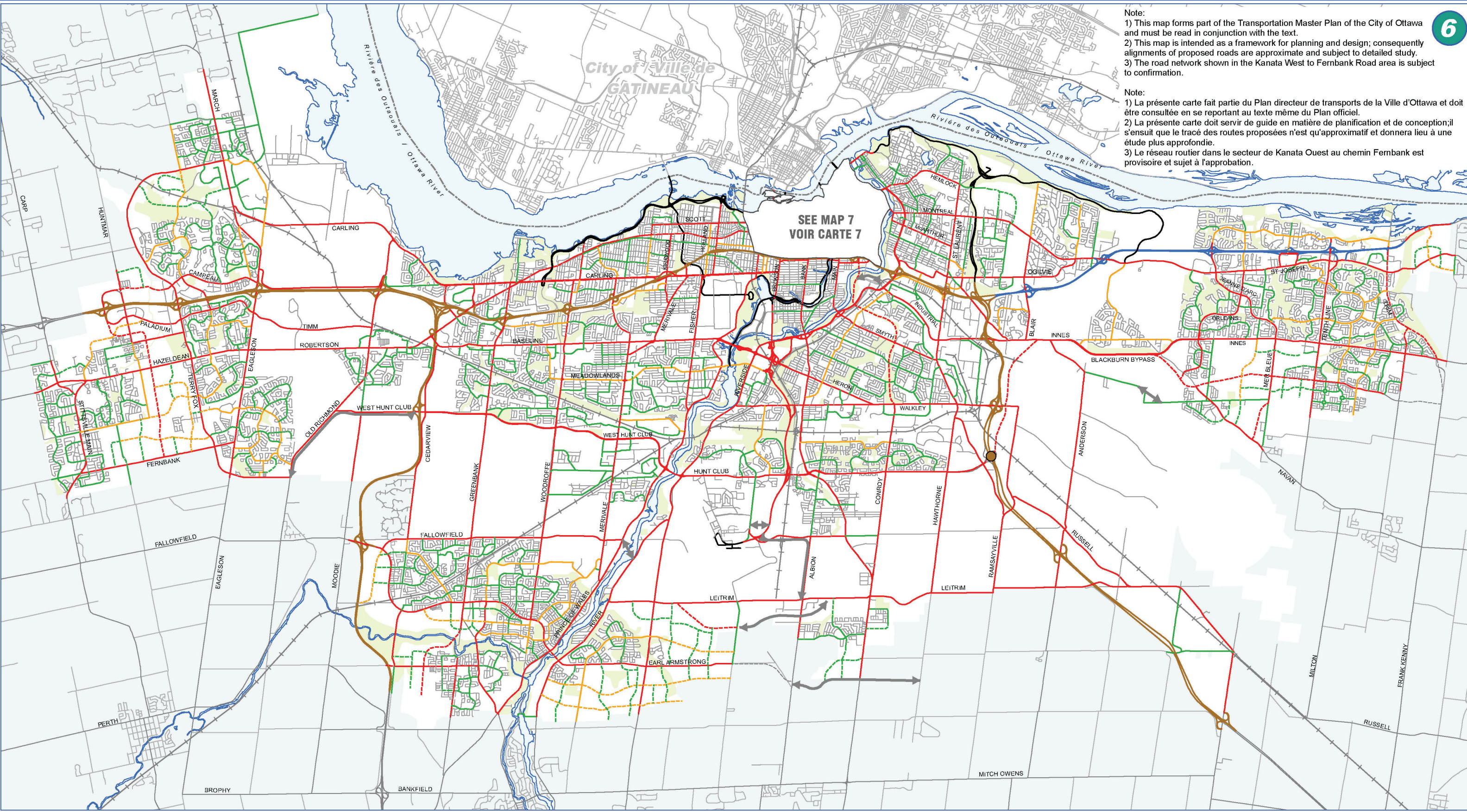
New Arterials		Nouvelles artères
Widened Arterial		Artères élargies
Conceptual Arterial		Conception d'artères
New or Widened Collector		Artères élargies ou nouvelles
New Interchange		Nouvel échangeur

TRANSPORTATION MASTER PLAN - Map 10
ROAD NETWORK – 2031 NETWORK CONCEPT

PLAN DIRECTEUR DES TRANSPORTS - Carte 10
RÉSEAU ROUTIER - CONCEPT DU RÉSEAU 2031

Note:
1) This map forms part of the Transportation Master Plan of the City of Ottawa and must be read in conjunction with the text.
2) This map is intended as a framework for planning and design; consequently alignments of proposed roads are approximate and subject to detailed study.
3) The road network shown in the Kanata West to Fernbank Road area is subject to confirmation.

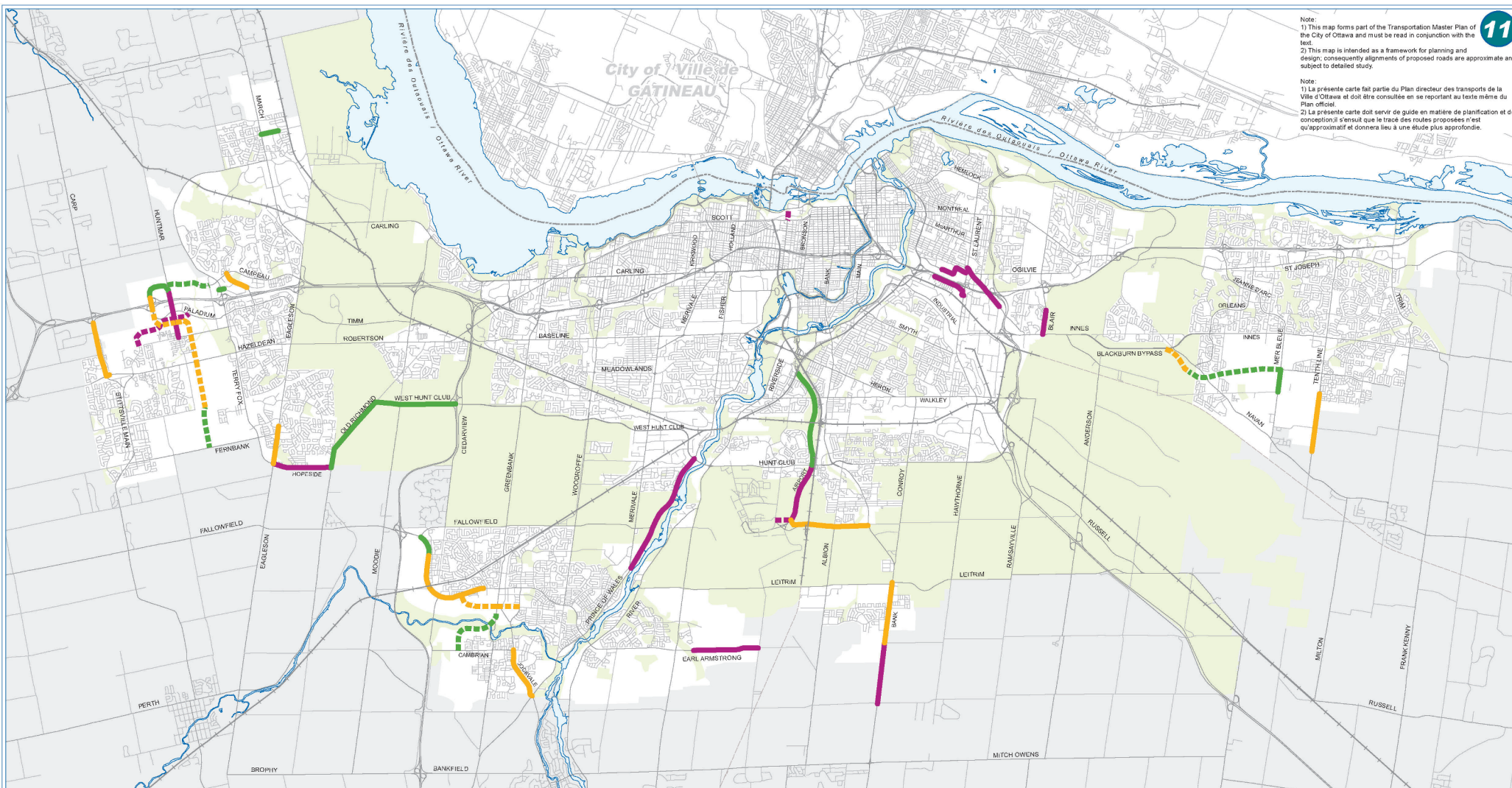
Note:
1) La présente carte fait partie du Plan directeur de transports de la Ville d'Ottawa et doit être consultée en se reportant au texte même du Plan officiel.
2) La présente carte doit servir de guide en matière de planification et de conception; il s'ensuit que le tracé des routes proposées n'est qu'approximatif et donnera lieu à une étude plus approfondie.
3) Le réseau routier dans le secteur de Kanata Ouest au chemin Fernbank est provisoire et sujet à l'approbation.



Provincial Highway	Chemins de propriété fédéral	Arterial - Existing	Artère - Établie
Federally Owned Road	Route provinciale	Arterial - Proposed (alignment defined)	Artère - Proposé (alignement déterminée)
City Freeway	Autoroute de ville	Arterial - Conceptual (alignment undefined)	Artère - Conceptuelle (alignement à déterminer)
		Major Collector - Existing	Grande collectrice - Établie
		Major Collector - Proposed	Grande collectrice - Proposé
		Collector - Existing	Collectrice - Établie
		Collector - Proposed	Collectrice - Proposé
		New Interchange	Nouvel échangeur

Note:
1) This map forms part of the Transportation Master Plan of the City of Ottawa and must be read in conjunction with the text.
2) This map is intended as a framework for planning and design; consequently alignments of proposed roads are approximate and subject to detailed study.

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2) La présente carte doit servir de guide en matière de planification et de conception; il s'ensuit que le tracé des routes proposées n'est qu'approximatif et donnera lieu à une étude plus approfondie.



Phase 1 (2014 - 2019) Widening
Phase 1 (2014 - 2019) New Road
Phase 2 (2020 - 2025) Widening
Phase 2 (2020 - 2025) New Road
Phase 3 (2026 - 2031) Widening
Phase 3 (2026 - 2031) New Road

Phase 1 (2014 - 2019) élargissement
Phase 1 (2014 - 2019) Nouvelle route
Phase 2 (2020 - 2025) élargissement
Phase 2 (2020 - 2025) Nouvelle route
Phase 3 (2026 - 2031) élargissement
Phase 3 (2026 - 2031) Nouvelle route

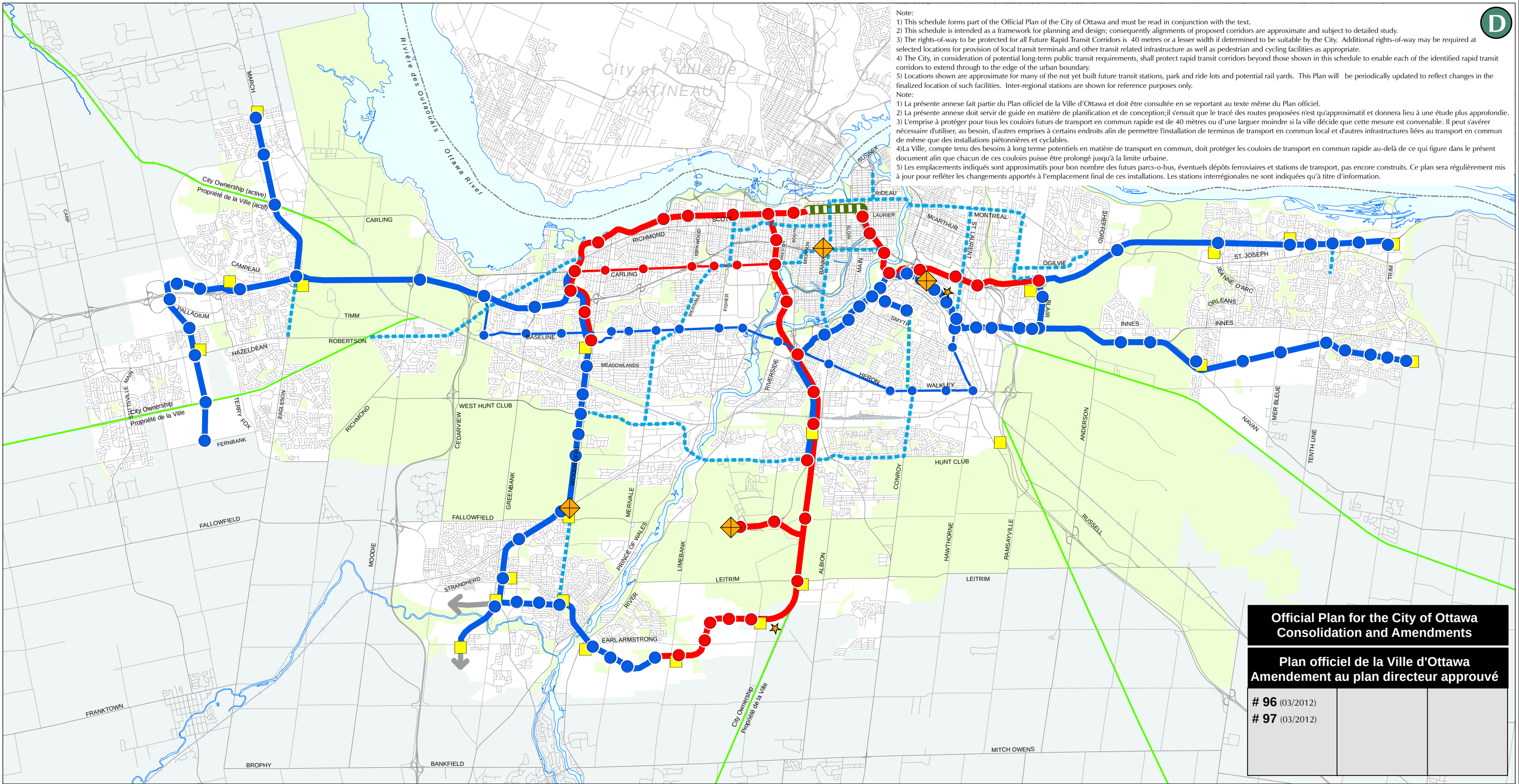
TRANSPORTATION MASTER PLAN - Map 11
ROAD NETWORK – 2031 AFFORDABLE NETWORK

PLAN DIRECTEUR DES TRANSPORTS - Carte 11
RÉSEAU ROUTIER - RÉSEAU ABORDABLE 2031



1 0.5 0 1 2 3 km

Prepared by: Planning and Growth Management Department,
Mapping & Graphics Unit, 2015 Revision
Préparé par: Service de l'urbanisme et de la gestion de la
croissance, Unité de la cartographie et des graphiques, Révision 2015



Note:

- 1) This schedule forms part of the Official Plan of the City of Ottawa and must be read in conjunction with the text.
- 2) This schedule is intended as a framework for planning and design; consequently alignments of proposed corridors are approximate and subject to detailed study.
- 3) The rights-of-way to be protected for all Future Rapid Transit Corridors is 40 metres or a lesser width if determined to be suitable by the City. Additional rights-of-way may be required at selected locations for provision of local transit terminals and other transit related infrastructure as well as pedestrian and cycling facilities as appropriate.
- 4) The City, in consideration of potential long-term public transit requirements, shall protect rapid transit corridors beyond those shown in this schedule to enable each of the identified rapid transit corridors to extend through to the edge of the urban boundary.
- 5) Locations shown are approximate for many of the not yet built future transit stations, park and ride lots and potential rail yards. This Plan will be periodically updated to reflect changes in the finalized location of such facilities. Inter-regional stations are shown for reference purposes only.

Note:

- 1) La présente annexe fait partie du Plan officiel de la Ville d'Ottawa et doit être consultée en se reportant au texte même du Plan officiel.
- 2) La présente annexe doit servir de guide en matière de planification et de conception; il s'ensuit que le tracé des routes proposées n'est qu'approximatif et donnera lieu à une étude plus approfondie.
- 3) L'emprise à protéger pour tous les couloirs futurs de transport en commun rapide est de 40 mètres ou d'un largeur moindre si la ville décide que cette mesure est convenable. Il peut s'avérer nécessaire d'utiliser, au besoin, d'autres emprises à certains endroits afin de permettre l'installation de terminus de transport en commun local et d'autres infrastructures liées au transport en commun de même que des installations piétonnières et cyclables.
- 4) La Ville, compte tenu des besoins à long terme potentiels en matière de transport en commun, doit protéger les couloirs de transport en commun rapide au-delà de ce qui figure dans le présent document afin que chacun de ces couloirs puisse être prolongé jusqu'à la limite urbaine.
- 5) Les emplacements indiqués sont approximatifs pour bon nombre des futurs parcs-o-bus, éventuels dépôts ferroviaires et stations de transport, pas encore construits. Ce plan sera régulièrement mis à jour pour refléter les changements apportés à l'emplacement final de ces installations. Les stations interrégionales ne sont indiquées qu'à titre d'information.

OFFICIAL PLAN - Schedule D
RAPID TRANSIT NETWORK

PLAN OFFICIEL - Annexe D
RÉSEAU DE TRANSPORT EN COMMUN RAPIDE

- | PRIMARY | PRINCIPAL |
|--------------------------|---|
| Light Rail Transit (LRT) | Train léger sur rail (TLR) |
| Bus Rapid Transit (BRT) | Transport en commun rapide par autobus (TCRA) |
| LRT Downtown Tunnel | TLR Tunnel au centre-ville |
-
- | SUPPLEMENTARY | SUPPLÉMENTAIRE |
|--------------------------|--|
| Intensive Transit - Bus | Transport en commun intensif - autobus |
| Intensive Transit - Rail | Transport en commun intensif - train |
| Transit Priority | Transport prioritaire |

- | | |
|-------------------------------------|--|
| Park and Ride (see note 5) | Parc-O-Bus (voir la note 5) |
| Transit Station - rail (see note 5) | Station du transport - train (voir la note 5) |
| Transit Station - bus (see note 5) | Station du transport - autobus (voir la note 5) |
| Conceptual Future Transit Corridor | Avenir conceptuel - Couloir de transport en commun |
| Abandoned Railway Corridor | Emprises ferroviaires abandonnées |
| Inter-regional Stations | Stations interrégionales |
| Potential Rail Yard (see note 5) | Cour de tirage possible pour trains (voir la note 5) |

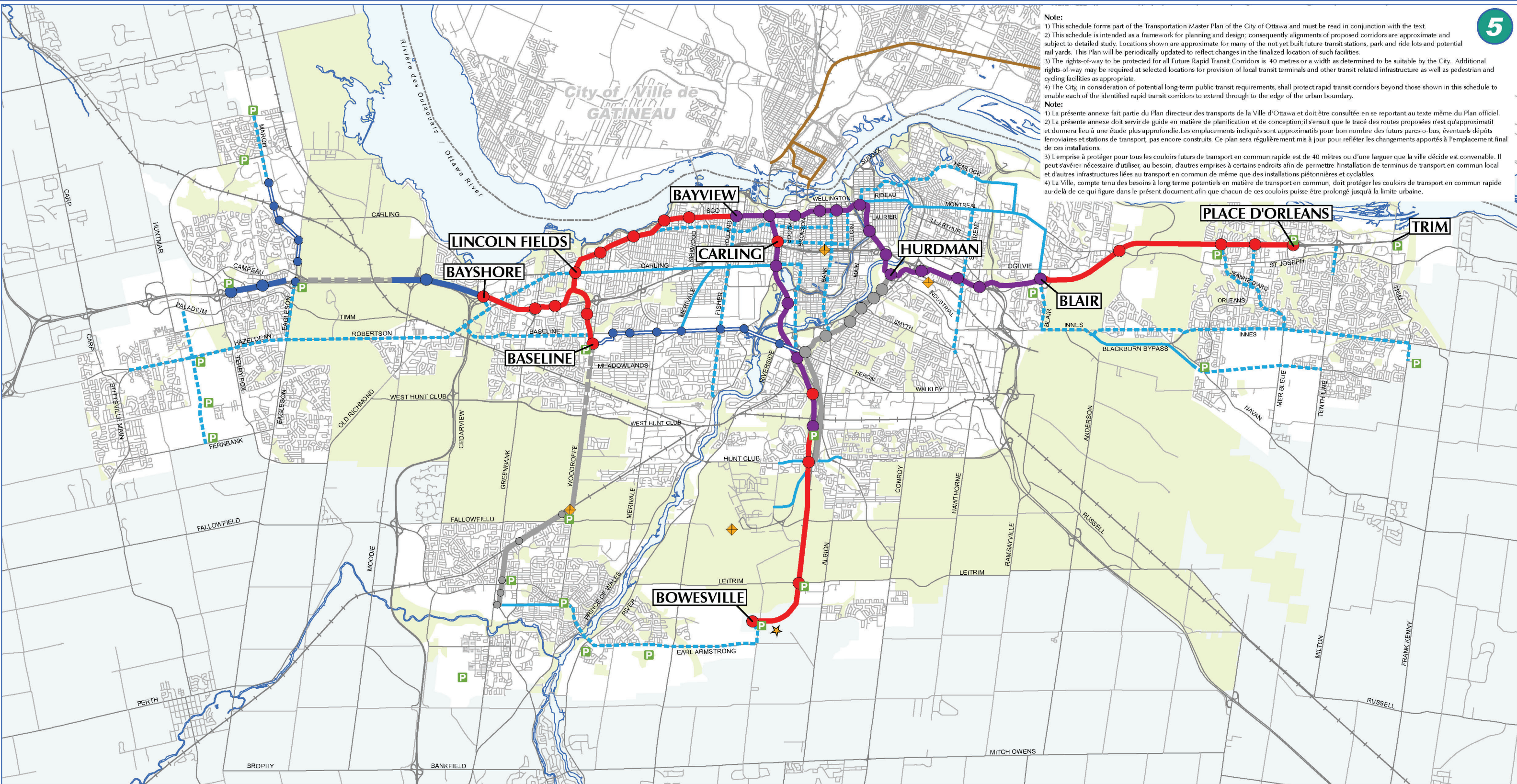
Official Plan for the City of Ottawa
Consolidation and Amendments

Plan officiel de la Ville d'Ottawa
Amendement au plan directeur approuvé

# 96 (03/2012)		
# 97 (03/2012)		



Prepared by: Planning and Growth Management Department
Préparé par: Service de l'urbanisme et de la gestion de la croissance



Note:

1) This schedule forms part of the Transportation Master Plan of the City of Ottawa and must be read in conjunction with the text.

2) This schedule is intended as a framework for planning and design; consequently alignments of proposed corridors are approximate and subject to detailed study. Locations shown are approximate for many of the not yet built future transit stations, park and ride lots and potential rail yards. This Plan will be periodically updated to reflect changes in the finalized location of such facilities.

3) The rights-of-way to be protected for all Future Rapid Transit Corridors is 40 metres or a width as determined to be suitable by the City. Additional rights-of-way may be required at selected locations for provision of local transit terminals and other transit related infrastructure as well as pedestrian and cycling facilities as appropriate.

4) The City, in consideration of potential long-term public transit requirements, shall protect rapid transit corridors beyond those shown in this schedule to enable each of the identified rapid transit corridors to extend through to the edge of the urban boundary.

Note:

1) La présente annexe fait partie du Plan directeur des transports de la Ville d'Ottawa et doit être consultée en se reportant au texte même du Plan officiel.

2) La présente annexe doit servir de guide en matière de planification et de conception; il s'ensuit que le tracé des routes proposées n'est qu'approximatif et donnera lieu à une étude plus approfondie. Les emplacements indiqués sont approximatifs pour bon nombre des futurs parcs-o-bus, éventuels dépôts ferroviaires et stations de transport, pas encore construits. Ce plan sera régulièrement mis à jour pour refléter les changements apportés à l'emplacement final de ces installations.

3) L'emprise à protéger pour tous les couloirs futurs de transport en commun rapide est de 40 mètres ou d'une largeur que la ville décide est convenable. Il peut s'avérer nécessaire d'utiliser, au besoin, d'autres emprises à certains endroits afin de permettre l'installation de terminus de transport en commun local et d'autres infrastructures liées au transport en commun de même que des installations piétonnières et cyclables.

4) La Ville, compte tenu des besoins à long terme potentiels en matière de transport en commun, doit protéger les couloirs de transport en commun rapide au-delà de ce qui figure dans le présent document afin que chacun de ces couloirs puisse être prolongé jusqu'à la limite urbaine.



1 0.5 0 1 2 3 km

Prepared by: Planning and Growth Management Department,
Mapping & Graphics Unit, 2015 Revision
Préparé par: Service de l'urbanisme et de la gestion de la
croissance, Unité de la cartographie et des graphiques, Révision 2015

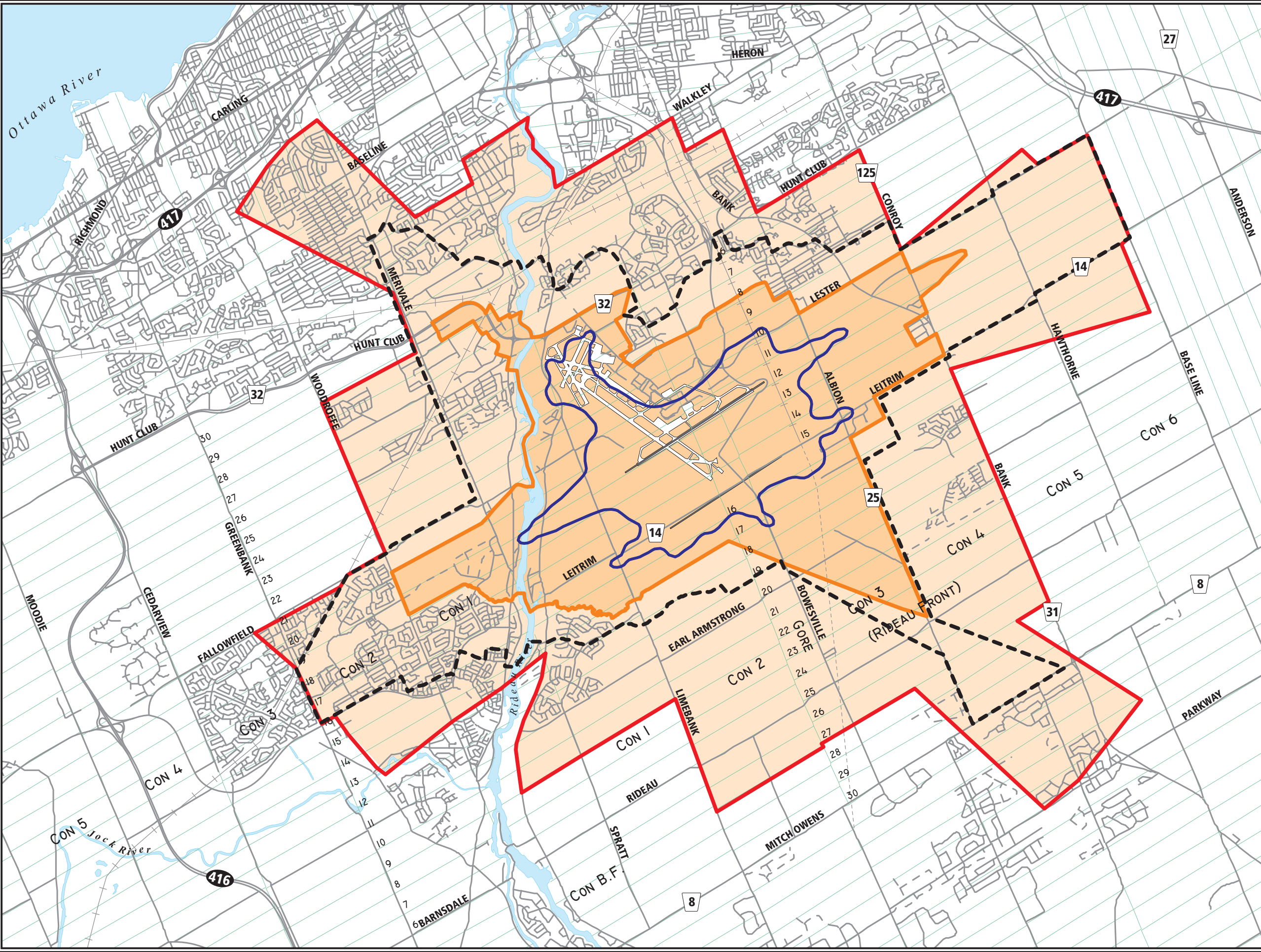
RAPID TRANSIT	TRANSPORT EN COMMUN RAPIDE	Existing Transit Station - Bus	Station de transport en commun actuelle – autobus
Existing Bus Rapid Transit (BRT)	Transport en commun rapide par autobus actuel	Existing / Committed Transit Station - Rail	Station de transport en commun actuelle/prévue – train
Existing Bus Lanes	Voies actuelles réservées aux autobus	Future Transit Station - Rail	Station de transport en commun future – train
Existing / Committed Rail	Réseau de transport ferroviaire actuel/prévu	Future Transit Station - Bus	Station de transport en commun future – autobus
Future Rail	Réseau ferroviaire futur	Inter-regional Stations	Stations interrégionales
Future Bus Rapid Transit (BRT)	Transport en commun rapide par autobus (TCRA) futur	Potential Rail Yard	Cour de tirage possible pour trains
Future Bus Rapid Transit (BRT) - At-Grade Crossings	Transport en commun rapide par autobus (TCRA) - passages à niveau futur	Gatineau Rapibus	Rapibus de Gatineau
TRANSIT PRIORITY	PRIORITÉ AU TRANSPORT EN COMMUN	Park and Ride	Parc-O-Bus
Transit Priority Corridor (Continuous Lanes)	Corridor donnant priorité au transport en commun (voies continues)		
Transit Priority Corridor (Isolated Measures)	Corridor donnant priorité au transport en commun (mesures isolées)		

TRANSPORTATION MASTER PLAN - Map 5

**RAPID TRANSIT AND
TRANSIT PRIORITY NETWORK
- 2031 AFFORDABLE NETWORK**

PLAN DIRECTEUR DES TRANSPORTS - Carte 5

**RÉSEAU DE TRANSPORT EN COMMUN RAPIDE
ET DE TRANSPORT EN COMMUN PRIORITAIRE
– RÉSEAU ABORDABLE 2031**



OFFICIAL PLAN - ANNEX 10 Land Use Constraints Due to Aircraft Noise

Prepared by: City of Ottawa,
Department of Planning, Transit and the Environment,
September 2011

PLAN OFFICIEL - APPENDICE 10 Contraintes limitant l'utilisation en raison du bruit des avions

Préparé par : Ville d'Ottawa,
Le Service de l'urbanisme, du transport en commun et de l'environnement,
septembre 2011

- Airport Vicinity Development Zone
Zone d'aménagement dans le voisinage de l'aéroport
- 25 Line (Composite of 25 NEF/NEP)
Ligne 25 (ensemble des courbes NEF et NEP 25)
- 35 Line Noise Exposure Protection (NEP 2023)
Ligne 35 : prévisions à long terme de l'ambiance sonore (NEP 2023)
- Airport Zoning Regulations
Règlements de zonage applicables à de l'Aéroport
- Airport Operating Influence Zone
Zone d'influence d'exploitation de l'aéroport

Note:
The boundaries of the Ottawa Airport Operating Influence Zone and the Airport Vicinity Development Zone, are not subject to interpretation and their precise locations should be read from a map at a scale of 1:50,000 available from the City of Ottawa and the Ottawa International Airport Authority.

Scale / Échelle
1km 0 1 2 3 km



Appendix B: Table of Traffic and Road Parameters To Be Used For Sound Level Predictions

Table B1 Traffic And Road Parameters To Be Used For Sound Level Predictions

Row Width (m)	Implied Roadway Class	AADT Vehicles/Day	Posted Speed Km/Hr	Day/Night Split %	Medium Trucks %	Heavy Trucks % ¹
NA ²	Freeway, Queensway, Highway	18,333 per lane	100	92/8	7	5
37.5-44.5	6-Lane Urban Arterial-Divided (6 UAD)	50,000	50-80	92/8	7	5
34-37.5	4-Lane Urban Arterial-Divided (4-UAD)	35,000	50-80	92/8	7	5
23-34	4-Lane Urban Arterial-Undivided (4-UAU)	30,000	50-80	92/8	7	5
23-34	4-Lane Major Collector (4-UMCU)	24,000	40-60	92/8	7	5
30-35.5	2-Lane Rural Arterial (2-RAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Urban Arterial (2-UAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Major Collector (2-UMCU)	12,000	40-60	92/8	7	5
30-35.5	2-Lane Outer Rural Arterial (near the extremities of the City) (2-RAU)	10,000	50-80	92/8	7	5
20-30	2-Lane Urban Collector (2-UCU)	8,000	40-50	92/8	7	5

¹ The MOE Vehicle Classification definitions should be used to estimate automobiles, medium trucks and heavy trucks.

² The number of lanes is determined by the future mature state of the roadway.

Table 2.2a: Sound Level Limit for Outdoor Living Areas - Road and Rail
 (from NPC-300, 2013 Table C-1)

Time Period	Required Leq (16) (dBA)
16-hour, 07:00 – 23:00	55

Table 2.2b: Sound Level Limit for Indoor Living Areas Road and Rail
 (from NPC-300, 2013 Table C-2)

Type of Space	Time Period	Required Leq (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35

The Province also provides for supplementary indoor sound level limits for land uses not generally considered noise sensitive (see Table 2.2c below). These good practice design objectives should be addressed in any noise study prepared for the City. These supplementary sound level limits are based on the windows and doors to an indoor space being closed.

Table 2.2c: Supplementary Sound Level Limits for Indoor Spaces - Road and Rail (adapted from NPC-300 Table C-9)

Type of Space	Time Period	Required Leq (dBA)	
		Road	Rail
General offices, reception areas, retail stores, etc.	16 hours between 07:00 – 23:00	50	45
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	16 hours between 07:00 – 23:00	45	40
Sleeping quarters of hotels/motels	8 hours between 23:00 – 07:00	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	8 hours between 23:00 – 07:00	40	35

Mark Bowen

From: Yousfani, Asad <Asad.Yousfani@ottawa.ca>
Sent: Tuesday, May 29, 2018 3:48 PM
To: Mark Bowen
Cc: Melanie Riddell
Subject: RE: Legault Lands Noise Source Confirmation

Hi Mark,
All streets should be considered as locals (most of them have 18-20 m r.o.w) except street 1, which shows a r.o.w of 22m. Street 1 seems to be the major street on the plan and I recommend considering it as collector street (2-UCU). Some of the streets don't show the r.o.w.
Hope this answers your question.
Thanks-ASAD

From: Mark Bowen <M.Bowen@novatech-eng.com>
Sent: Tuesday, May 29, 2018 3:23 PM
To: Yousfani, Asad <Asad.Yousfani@ottawa.ca>
Cc: Melanie Riddell <m.riddell@novatech-eng.com>
Subject: RE: Legault Lands Noise Source Confirmation

Hi Asad,

Can you please confirm the road classifications for the proposed Streets 1-11, see attached.

Mark Bowen, B. Eng
Project Manager – Land Development Engineering

NOVATECH

Engineers, Planners & Landscape Architects

240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 231 | Fax: 613.254.5867
The information contained in this email message is confidential and is for exclusive use of the addressee

From: Yousfani, Asad [<mailto:Asad.Yousfani@ottawa.ca>]
Sent: May-25-18 12:08 PM
To: Mark Bowen <M.Bowen@novatech-eng.com>
Cc: Curry, William <William.Curry@ottawa.ca>; Melanie Riddell <m.riddell@novatech-eng.com>
Subject: RE: Legault Lands Noise Source Confirmation

Hi Mark,

My response in yellow. The rest in fine.

Thanks-ASAD

From: Mark Bowen <M.Bowen@novatech-eng.com>
Sent: Friday, May 18, 2018 1:48 PM
To: Yousfani, Asad <Asad.Yousfani@ottawa.ca>

Cc: Curry, William <William.Curry@ottawa.ca>; Melanie Riddell <m.riddell@novatech-eng.com>

Subject: Legault Lands Noise Source Confirmation

Hi Asad,

I'm preparing a noise study in support of Legault Lands' (Phases 1-6) Draft Plan application, can you please confirm my noise source assumptions are correct.

1. Airport: As per Annex 10, Lands Use Constraints Due to Aircraft Noise, the Legault Lands are located outside the airport noise limits. No action required.
2. Buses: As per Transportation Master Plan – Map 5 - Rapid Transit and Transit Priority Network 2031 Affordable Network, the Legault Lands are located less than 100m from the Transit Priority Corridor. Can you please confirm the bus schedules for Innes and Trim so they can be included in the analysis. **Contact Genya Genya Stefanoff at 613-580-2424 x52294.**
3. Roads: The attached Road Confirmation figure confirms the road and site locations. The assumed road AADTs are listed below.
 - Innes – Arterial – 4 Lane Divided – 60km/hr – AADT=35,000
 - Trim – Arterial - 4 Lane Divided – 60km/hr – AADT=35,000
 - Brian Coburn – 2 Lane Undivided – 60km/hr – AADT=15,000 **(Brian Coburn should be considered 4-lane = 35,000. All other studies in the area are doing the same.**
 - Esprit – 2 Lane Major Collector – 50km/hr – AADT=12,000
 - Portobello – 4 Lane Major Collector – 50km/hr – AADT=24,000
 - Scala/Aquaview/Nantes/Provence/Montmere – 2 Lane Collector – 50km/hr – AADT=8,000

Finally, can you review the attached CP14 figure and confirm the road classifications for proposed streets (1-11). Please call if you have questions.

Mark Bowen, B. Eng
Project Manager – Land Development Engineering

NOVATECH

Engineers, Planners & Landscape Architects

240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 231 | Fax: 613.254.5867

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Appendix B

STAMSON Noise Modelling Results

Filename: ola1.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -30.00 deg 40.00 deg
Wood depth : 1 (Wood depth 30 to less than 60 metres)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 110.00 / 110.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00

Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Nantes (day/night)

Angle1	Angle2	:	40.00 deg	70.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	1 / 1		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	110.00 / 110.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Scala (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	20.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	310.00 / 310.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Provence (day/night)


```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32     veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2      : -90.00 deg   90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 440.00 / 440.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134   veh/TimePeriod *
Heavy truck volume : 1104/96     veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00

```

Data for Segment # 5: Portobello (day/night)

```

-----

```

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 2 / 2
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 160.00 / 160.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Result summary (day)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	44.77	!	44.77
2.Nantes	!	1.50	!	36.30	!	36.30
3.Scala	!	1.50	!	32.46	!	32.46
4.Provence	!	1.50	!	29.05	!	29.05
5.Portobello	!	1.50	!	45.00	!	45.00
	!		!		!	
		Total				48.35 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	37.18	!	37.18
2.Nantes	!	1.50	!	28.71	!	28.71
3.Scala	!	1.50	!	24.86	!	24.86
4.Provence	!	1.50	!	21.46	!	21.46
5.Portobello	!	1.50	!	37.40	!	37.40
	!		!		!	
		Total				40.76 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.35
 (NIGHT): 40.76

↑

↑

Filename: ola2.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -10.00 deg 20.00 deg
Wood depth : 1 (Wood depth 30 to less than 60 metres)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 160.00 / 160.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00

Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Nantes (day/night)

Angle1	Angle2	:	20.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	2 / 2		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	160.00 / 160.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Scala (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	40.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	260.00 / 260.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   90.00 deg
Wood depth : 0         (No woods.)
No of house rows : 5 / 5
House density : 80 %
Surface : 1         (Absorptive ground surface)
Receiver source distance : 420.00 / 420.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134  veh/TimePeriod *
Heavy truck volume  : 1104/96   veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Portobello (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 2 / 1
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 170.00 / 170.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Result summary (day)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	38.96	!	38.96
2.Nantes	!	1.50	!	35.63	!	35.63
3.Scala	!	1.50	!	34.47	!	34.47
4.Provence	!	1.50	!	29.35	!	29.35
5.Portobello	!	1.50	!	44.59	!	44.59
	+		+		+	
		Total				46.43 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	31.37	!	31.37
2.Nantes	!	1.50	!	28.03	!	28.03
3.Scala	!	1.50	!	26.88	!	26.88
4.Provence	!	1.50	!	21.75	!	21.75
5.Portobello	!	1.50	!	38.49	!	38.49
	+		+		+	
		Total				39.87 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 46.43
 (NIGHT): 39.87

↑

↑

STAMSON 5.0 NORMAL REPORT Date: 30-01-2019 15:42:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola3.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -10.00 deg 25.00 deg
Wood depth : 1 (Wood depth 30 to less than 60 metres)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 240.00 / 240.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00

Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Nantes (day/night)

Angle1	Angle2	:	25.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	2 / 2		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	240.00 / 240.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Scala (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	25.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	4 / 4		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	220.00 / 220.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32     veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2      : -90.00 deg   90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 330.00 / 330.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134   veh/TimePeriod *
Heavy truck volume : 1104/96     veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Portobello (day/night)

```

-----

```

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 3 / 3
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 250.00 / 250.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Nates (day)

Source height = 1.50 m

ROAD (0.00 + 37.22 + 0.00) = 37.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	25	0.36	65.75	0.00	-16.38	-7.15	-5.00	0.00	0.00	37.22

Segment Leq : 37.22 dBA

↑

Results segment # 2: Nantes (day)

Source height = 1.50 m

ROAD (0.00 + 32.42 + 0.00) = 32.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
25	90	0.66	65.75	0.00	-19.99	-6.55	0.00	-6.80	0.00	32.42

Segment Leq : 32.42 dBA

↑

Results segment # 3: Scala (day)

Source height = 1.50 m

ROAD (0.00 + 33.47 + 0.00) = 33.47 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	25	0.66	65.75	0.00	-19.36	-3.07	0.00	-9.85	0.00	33.47

Segment Leq : 33.47 dBA



Results segment # 4: Provence (day)

Source height = 1.50 m

ROAD (0.00 + 30.90 + 0.00) = 30.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-90	90	0.66	65.75	0.00	-22.28	-1.46	0.00	-11.11	0.00	30.90
-----	----	------	-------	------	--------	-------	------	--------	------	-------

Segment Leq : 30.90 dBA



Results segment # 5: Portobello (day)

Source height = 1.50 m

ROAD (0.00 + 40.50 + 0.00) = 40.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-90	90	0.66	70.52	0.00	-20.28	-1.46	0.00	-8.28	0.00	40.50
-----	----	------	-------	------	--------	-------	------	-------	------	-------

Segment Leq : 40.50 dBA

Total Leq All Segments: 43.36 dBA



Results segment # 1: Nates (night)

Source height = 1.50 m

ROAD (0.00 + 29.63 + 0.00) = 29.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-10	25	0.36	58.16	0.00	-16.38	-7.15	-5.00	0.00	0.00	29.63
-----	----	------	-------	------	--------	-------	-------	------	------	-------

Segment Leq : 29.63 dBA



Results segment # 2: Nantes (night)

Source height = 1.50 m

ROAD (0.00 + 24.82 + 0.00) = 24.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
25	90	0.66	58.16	0.00	-19.99	-6.55	0.00	-6.80	0.00	24.82

Segment Leq : 24.82 dBA

↑
Results segment # 3: Scala (night)

Source height = 1.50 m

ROAD (0.00 + 25.88 + 0.00) = 25.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	25	0.66	58.16	0.00	-19.36	-3.07	0.00	-9.85	0.00	25.88

Segment Leq : 25.88 dBA

↑
Results segment # 4: Provence (night)

Source height = 1.50 m

ROAD (0.00 + 23.30 + 0.00) = 23.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	58.16	0.00	-22.28	-1.46	0.00	-11.11	0.00	23.30

Segment Leq : 23.30 dBA

↑
Results segment # 5: Portobello (night)

Source height = 1.50 m

ROAD (0.00 + 32.90 + 0.00) = 32.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	62.92	0.00	-20.28	-1.46	0.00	-8.28	0.00	32.90

Segment Leq : 32.90 dBA

Total Leq All Segments: 35.77 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 43.36
(NIGHT): 35.77



Filename: ola4.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -20.00 deg 30.00 deg
Wood depth : 1 (Wood depth 30 to less than 60 metres)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 220.00 / 220.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Nantes (day/night)

 Angle1 Angle2 : 30.00 deg 50.00 deg
 Wood depth : 1 (Wood depth 30 to less than 60 metres)
 No of house rows : 1 / 1
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 220.00 / 220.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Road data, segment # 3: Scala (day/night)

 Car traffic volume : 6477/563 veh/TimePeriod *
 Medium truck volume : 515/45 veh/TimePeriod *
 Heavy truck volume : 368/32 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 3: Scala (day/night)

 Angle1 Angle2 : -90.00 deg 10.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 4 / 4
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 290.00 / 290.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Road data, segment # 4: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod  *
Medium truck volume : 515/45    veh/TimePeriod  *
Heavy truck volume  : 368/32    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   90.00 deg
Wood depth : 0         (No woods.)
No of house rows : 4 / 4
House density : 80 %
Surface : 1         (Absorptive ground surface)
Receiver source distance : 270.00 / 270.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod  *
Medium truck volume : 1546/134   veh/TimePeriod  *
Heavy truck volume  : 1104/96    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Portobello (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 2 / 2
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 320.00 / 320.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Results segment # 1: Nates (day)

Source height = 1.50 m

ROAD (0.00 + 39.27 + 0.00) = 39.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	30	0.36	65.75	0.00	-15.86	-5.62	-5.00	0.00	0.00	39.27

Segment Leq : 39.27 dBA

↑

Results segment # 2: Nantes (day)

Source height = 1.50 m

ROAD (0.00 + 30.71 + 0.00) = 30.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	50	0.36	65.75	0.00	-15.86	-9.97	-5.00	0.00	0.00	34.92
30	50	0.66	65.75	0.00	-19.36	-10.32	0.00	-5.35	0.00	30.71

Segment Leq : 30.71 dBA

↑

Results segment # 3: Scala (day)

Source height = 1.50 m

ROAD (0.00 + 30.86 + 0.00) = 30.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	10	0.66	65.75	0.00	-21.35	-3.84	0.00	-9.70	0.00	30.86

Segment Leq : 30.86 dBA

↑
Results segment # 4: Provence (day)

Source height = 1.50 m

ROAD (0.00 + 33.72 + 0.00) = 33.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	65.75	0.00	-20.84	-1.46	0.00	-9.74	0.00	33.72

Segment Leq : 33.72 dBA

↑
Results segment # 5: Portobello (day)

Source height = 1.50 m

ROAD (0.00 + 40.37 + 0.00) = 40.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	70.52	0.00	-22.06	-1.46	0.00	-6.63	0.00	40.37

Segment Leq : 40.37 dBA

Total Leq All Segments: 43.82 dBA

↑
Results segment # 1: Nates (night)

Source height = 1.50 m

ROAD (0.00 + 31.67 + 0.00) = 31.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	30	0.36	58.16	0.00	-15.86	-5.62	-5.00	0.00	0.00	31.67

Segment Leq : 31.67 dBA

↑
Results segment # 2: Nantes (night)

Source height = 1.50 m

ROAD (0.00 + 23.12 + 0.00) = 23.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	50	0.36	58.16	0.00	-15.86	-9.97	-5.00	0.00	0.00	27.32
30	50	0.66	58.16	0.00	-19.36	-10.32	0.00	-5.35	0.00	23.12

Segment Leq : 23.12 dBA

↑

Results segment # 3: Scala (night)

Source height = 1.50 m

ROAD (0.00 + 23.27 + 0.00) = 23.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	10	0.66	58.16	0.00	-21.35	-3.84	0.00	-9.70	0.00	23.27

Segment Leq : 23.27 dBA

↑

Results segment # 4: Provence (night)

Source height = 1.50 m

ROAD (0.00 + 26.13 + 0.00) = 26.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	58.16	0.00	-20.84	-1.46	0.00	-9.74	0.00	26.13

Segment Leq : 26.13 dBA

↑

Results segment # 5: Portobello (night)

Source height = 1.50 m

ROAD (0.00 + 32.77 + 0.00) = 32.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	62.92	0.00	-22.06	-1.46	0.00	-6.63	0.00	32.77

Segment Leq : 32.77 dBA

Total Leq All Segments: 36.22 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 43.82
(NIGHT): 36.22



Filename: ola5.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -30.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 95 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 170.00 / 170.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Nantes (day/night)

Angle1	Angle2	:	-10.00 deg	30.00 deg
Wood depth	:	1	(Wood depth 30 to less than 60 metres)	
No of house rows	:	0 / 0		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	170.00 / 170.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Nantes (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Nantes (day/night)

Angle1	Angle2	:	30.00 deg	40.00 deg
Wood depth	:	1	(Wood depth 30 to less than 60 metres)	
No of house rows	:	1 / 1		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	170.00 / 170.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Scala (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod  *
Medium truck volume : 515/45    veh/TimePeriod  *
Heavy truck volume  : 368/32    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Scala (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 4 / 4
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod  *
Medium truck volume : 515/45    veh/TimePeriod  *
Heavy truck volume  : 368/32    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Provence (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 4 / 4
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 250.00 / 250.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Road data, segment # 6: Portobello (day/night)

 Car traffic volume : 19430/1690 veh/TimePeriod *
 Medium truck volume : 1546/134 veh/TimePeriod *
 Heavy truck volume : 1104/96 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 6: Portobello (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 1 (Wood depth 30 to less than 60 metres)
 No of house rows : 2 / 2
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 340.00 / 340.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Result summary (day)

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Nates	! 1.50 !	30.24 !	30.24

2.Nantes	!	1.50	!	39.82	!	39.82
3.Nantes	!	1.50	!	29.64	!	29.64
4.Scala	!	1.50	!	29.10	!	29.10
5.Provence	!	1.50	!	34.23	!	34.23
6.Portobello	!	1.50	!	39.97	!	39.97
-----+-----+-----+-----						
Total						43.97 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
	+		+		+	
1.Nates	!	1.50	!	22.65	!	22.65
2.Nantes	!	1.50	!	32.23	!	32.23
3.Nantes	!	1.50	!	22.05	!	22.05
4.Scala	!	1.50	!	21.51	!	21.51
5.Provence	!	1.50	!	26.64	!	26.64
6.Portobello	!	1.50	!	32.37	!	32.37
	+		+		+	
		Total				36.38 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 43.97
(NIGHT): 36.38

↑

↑

Filename: ola6.te Time Period: Day/Night 16/8 hours
 Description:

Road data, segment # 1: Nates (day/night)

```
-----
Car traffic volume : 6477/563   veh/TimePeriod  *
Medium truck volume : 515/45    veh/TimePeriod  *
Heavy truck volume : 368/32     veh/TimePeriod  *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)
```

* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Nates (day/night)

```
-----
Angle1  Angle2      : -40.00 deg  20.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 1 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 270.00 / 270.00 m
Receiver height      : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle      : 0.00
```

↑

Road data, segment # 2: Nantes (day/night)

```
-----
Car traffic volume : 6477/563   veh/TimePeriod  *
Medium truck volume : 515/45    veh/TimePeriod  *
Heavy truck volume : 368/32     veh/TimePeriod  *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)
```

* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth          : 0.00
```

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Nantes (day/night)

 Angle1 Angle2 : 20.00 deg 35.00 deg
 Wood depth : 1 (Wood depth 30 to less than 60 metres)
 No of house rows : 1 / 1
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 270.00 / 270.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Road data, segment # 3: Scala (day/night)

 Car traffic volume : 6477/563 veh/TimePeriod *
 Medium truck volume : 515/45 veh/TimePeriod *
 Heavy truck volume : 368/32 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 3: Scala (day/night)

 Angle1 Angle2 : -90.00 deg 0.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 5 / 5
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 400.00 / 400.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Road data, segment # 4: Provence (day/night)


```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   90.00 deg
Wood depth : 0         (No woods.)
No of house rows : 3 / 3
House density : 70 %
Surface : 1         (Absorptive ground surface)
Receiver source distance : 140.00 / 140.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134   veh/TimePeriod *
Heavy truck volume  : 1104/96    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Portobello (day/night)

```

-----

```

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 3 / 3
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 480.00 / 480.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Result summary (day)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	38.49	!	38.49
2.Nantes	!	1.50	!	28.53	!	28.53
3.Scala	!	1.50	!	26.64	!	26.64
4.Provence	!	1.50	!	40.84	!	40.84
5.Portobello	!	1.50	!	36.28	!	36.28
-----+-----+-----+-----						
		Total				43.91 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	32.37	!	32.37
2.Nantes	!	1.50	!	20.94	!	20.94
3.Scala	!	1.50	!	19.05	!	19.05
4.Provence	!	1.50	!	33.25	!	33.25
5.Portobello	!	1.50	!	28.68	!	28.68
-----+-----+-----+-----						
		Total				36.80 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 43.91
 (NIGHT): 36.80

↑

↑

Filename: ola7.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -30.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 300.00 / 300.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	0.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	5 / 5		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	270.00 / 270.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	190.00 / 190.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 4: Portobello (day/night)

```
-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)
```

* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00
```

Data for Segment # 4: Portobello (day/night)

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 4 / 5
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 390.00 / 390.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑

Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Nates ! 1.50 ! 32.57 ! 32.57
2.Scala ! 1.50 ! 29.21 ! 29.21
3.Provence ! 1.50 ! 37.56 ! 37.56
4.Portobello ! 1.50 ! 36.09 ! 36.09
-----+-----+-----+-----
Total 40.94 dBA
```

↑

Result summary (night)

```
-----
! source ! Road ! Total
```

	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	24.98	!	24.98
2.Scala	!	1.50	!	21.61	!	21.61
3.Provence	!	1.50	!	29.97	!	29.97
4.Portobello	!	1.50	!	26.99	!	26.99
	!		!		!	
		Total				32.91 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 40.94
(NIGHT): 32.91

↑

↑

Filename: ola8a.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -25.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 3 / 3
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 360.00 / 360.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Nantes (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Nantes (day/night)

Angle1	Angle2	:	-5.00 deg	20.00 deg
Wood depth	:	1	(Wood depth 30 to less than 60 metres)	
No of house rows	:	2 / 2		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	360.00 / 360.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Nantes (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Nantes (day/night)

Angle1	Angle2	:	20.00 deg	35.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	5 / 5		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	360.00 / 360.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 4: Scala (day/night)

Angle1 Angle2 : -90.00 deg 10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 3 / 3
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 180.00 / 180.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 5: Provence (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 5: Provence (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   -50.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      2 / 2
House density   :      80 %
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height :    1.50 / 1.50 m
Topography     :      1      (Flat/gentle slope; no barrier)
Reference angle :      0.00

```

↑

Road data, segment # 6: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 6: Provence (day/night)

```

-----
Angle1   Angle2       : -50.00 deg   0.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      0 / 0
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height :    1.50 / 1.50 m
Topography     :      1      (Flat/gentle slope; no barrier)
Reference angle :      0.00

```

↑

Road data, segment # 7: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 7: Provence (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 4 / 4
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 8: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 8: Portobello (day/night)

Angle1 Angle2 : -90.00 deg -15.00 deg
Wood depth : 1 (Wood depth 30 to less than 60 metres)
No of house rows : 4 / 4
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 1.50 / 1.50 m

Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 9: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 9: Portobello (day/night)

Angle1 Angle2 : -15.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 95 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Result summary (day)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	25.13	!	25.13
2.Nantes	!	1.50	!	27.67	!	27.67
3.Nantes	!	1.50	!	20.64	!	20.64
4.Scala	!	1.50	!	35.54	!	35.54
5.Provence	!	1.50	!	30.31	!	30.31
6.Provence	!	1.50	!	41.13	!	41.13
7.Provence	!	1.50	!	32.71	!	32.71
8.Portobello	!	1.50	!	32.10	!	32.10

9.Portobello	!	1.50	!	29.12	!	29.12
-----+-----+-----+-----						
Total						43.61 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
-----+-----+-----+-----						
1.Nates	!	1.50	!	17.54	!	17.54
2.Nantes	!	1.50	!	20.07	!	20.07
3.Nantes	!	1.50	!	13.05	!	13.05
4.Scala	!	1.50	!	27.95	!	27.95
5.Provence	!	1.50	!	22.71	!	22.71
6.Provence	!	1.50	!	33.54	!	33.54
7.Provence	!	1.50	!	25.12	!	25.12
8.Portobello	!	1.50	!	24.50	!	24.50
9.Portobello	!	1.50	!	21.52	!	21.52
-----+-----+-----+-----						
Total						36.02 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 43.61
(NIGHT): 36.02

↑

↑

Filename: ola8b.te Time Period: Day/Night 16/8 hours
 Description:

Road data, segment # 1: Portobello (day/night)

```
-----
Car traffic volume   : 19430/1690   veh/TimePeriod  *
Medium truck volume : 1546/134    veh/TimePeriod  *
Heavy truck volume  : 1104/96     veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :    1 %
Road pavement       :    1 (Typical asphalt or concrete)
```

* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Portobello (day/night)

```
-----
Angle1  Angle2      :    0.00 deg   90.00 deg
Wood depth          :    0          (No woods.)
No of house rows    :    5 / 5
House density       :    80 %
Surface             :    1          (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height     :    1.50 / 1.50 m
Topography          :    1          (Flat/gentle slope; no barrier)
Reference angle     :    0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq  ! Leq
! (m)    ! (dBA) ! (dBA)
-----+-----+-----
1.Portobello ! 1.50 ! 31.74 ! 31.74
-----+-----+-----
Total                               31.74 dBA
```

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Portobello	!	1.50	!	24.15	!	24.15
Total						24.15 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 31.74
(NIGHT): 24.15

↑

↑

Provence Orleans Phase 6 Calculated Sounds Level

Created: September 27, 2019

Daytime

OLA 8	
Segment	Sound (dBA)
1	17.54
2	20.07
3	13.05
4	27.95
5	22.71
6	33.54
7	25.12
8	24.50
9	21.52
10	24.15
L_{eq} =	36.29

Filename: ola9.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -25.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 4 / 4
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 420.00 / 420.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	-10.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	200.00 / 200.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	5.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	0 / 0		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	110.00 / 110.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 4: Provence (day/night)

```

-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 4: Provence (day/night)

```

-----
Angle1   Angle2       : 5.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 90 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 110.00 / 110.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Road data, segment # 5: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134   veh/TimePeriod *
Heavy truck volume  : 1104/96    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 1 %
Road pavement       : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00

```

Data for Segment # 5: Portobello (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 4 / 4
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 470.00 / 470.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑

Result summary (day)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	26.20	!	26.20
2.Scala	!	1.50	!	33.48	!	33.48
3.Provence	!	1.50	!	47.24	!	47.24
4.Provence	!	1.50	!	37.58	!	37.58
5.Portobello	!	1.50	!	34.91	!	34.91
-----+-----+-----+-----						
		Total				48.09 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	18.61	!	18.61
2.Scala	!	1.50	!	25.89	!	25.89
3.Provence	!	1.50	!	39.65	!	39.65
4.Provence	!	1.50	!	29.99	!	29.99
5.Portobello	!	1.50	!	27.31	!	27.31
-----+-----+-----+-----						
		Total				40.50 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.09
 (NIGHT): 40.50

↑

↑

Filename: ola10.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -10.00 deg 35.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 460.00 / 460.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Scala (day/night)

 Angle1 Angle2 : -90.00 deg -20.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 3 / 3
 House density : 80 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 230.00 / 230.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00



Road data, segment # 3: Provence (day/night)

 Car traffic volume : 6477/563 veh/TimePeriod *
 Medium truck volume : 515/45 veh/TimePeriod *
 Heavy truck volume : 368/32 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 1 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 3: Provence (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 35.00 / 35.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00



Road data, segment # 4: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

```

Data for Segment # 4: Portobello (day/night)

```

-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 90 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 / 500.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```

↑

Result summary (day)

```

-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Nates ! 1.50 ! 24.06 ! 24.06
2.Scala ! 1.50 ! 31.69 ! 31.69
3.Provence ! 1.50 ! 58.18 ! 58.18
4.Portobello ! 1.50 ! 31.69 ! 31.69
-----+-----+-----+-----
Total 58.20 dBA

```

↑

Result summary (night)

```

! source ! Road ! Total
! height ! Leq ! Leq

```

	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	16.47	!	16.47
2.Scala	!	1.50	!	24.09	!	24.09
3.Provence	!	1.50	!	50.59	!	50.59
4.Portobello	!	1.50	!	24.09	!	24.09
		Total				50.61 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.20
(NIGHT): 50.61

↑

↑

Filename: ola11.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -30.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 90 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	0.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	4 / 4		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	250.00 / 250.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	0.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	1 / 1		
House density	:	90 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	110.00 / 110.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		



Road data, segment # 4: Provence (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 4: Provence (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 95 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 110.00 / 110.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 5: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 5: Portobello (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   90.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      5 / 5
House density    :     95 %
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 470.00 / 470.00 m
Receiver height  :    1.50 / 1.50 m
Topography      :      1      (Flat/gentle slope; no barrier)
Reference angle  :     0.00

```

↑

Result summary (day)

```

-----
! source ! Road ! Total
! height ! Leq  ! Leq
! (m)    ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Nates   ! 1.50 ! 25.15 ! 25.15
2.Scala   ! 1.50 ! 31.22 ! 31.22
3.Provence ! 1.50 ! 39.44 ! 39.44
4.Provence ! 1.50 ! 36.69 ! 36.69
5.Portobello ! 1.50 ! 31.29 ! 31.29
-----+-----+-----+-----
Total                                           42.16 dBA

```

↑

Result summary (night)

```

-----
! source ! Road ! Total
! height ! Leq  ! Leq
! (m)    ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Nates   ! 1.50 ! 17.56 ! 17.56
2.Scala   ! 1.50 ! 23.63 ! 23.63
3.Provence ! 1.50 ! 31.84 ! 31.84
4.Provence ! 1.50 ! 29.09 ! 29.09
5.Portobello ! 1.50 ! 23.69 ! 23.69
-----+-----+-----+-----
Total                                           34.56 dBA

```

↑

TOTAL Leq FROM ALL SOURCES (DAY): 42.16
(NIGHT): 34.56

↑



Filename: ola12.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -30.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 3 / 3
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 340.00 / 340.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	10.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	5 / 5		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	340.00 / 340.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	2 / 2		
House density	:	95 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	110.00 / 110.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Portobello (day/night)

```
-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)
```

* Refers to calculated road volumes based on the following input:

```
24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00
```

Data for Segment # 4: Portobello (day/night)

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 90 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 490.00 / 490.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑

Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Nates ! 1.50 ! 29.49 ! 29.49
2.Scala ! 1.50 ! 28.32 ! 28.32
3.Provence ! 1.50 ! 39.70 ! 39.70
4.Portobello ! 1.50 ! 31.83 ! 31.83
-----+-----+-----+-----
Total 40.94 dBA
```

↑

Result summary (night)

```
-----
! source ! Road ! Total
```

	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
1.Nates	!	1.50	!	21.90	!	21.90
2.Scala	!	1.50	!	20.72	!	20.72
3.Provence	!	1.50	!	32.10	!	32.10
4.Portobello	!	1.50	!	24.23	!	24.23
-----+-----+-----+-----						
		Total				33.34 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 40.94
(NIGHT): 33.34

↑

↑

Filename: ola13.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -50.00 deg 65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 70 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 180.00 / 180.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	50.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	2 / 2		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	210.00 / 210.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	80 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	500.00 / 500.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 4: Portobello (day/night)

Angle1 Angle2 : -90.00 deg -70.00 deg
Wood depth : 0 (No woods.)
No of house rows : 5 / 5
House density : 60 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 5: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 5: Portobello (day/night)

```

-----
Angle1   Angle2       : -70.00 deg   70.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      0 / 0
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height  :    1.50 / 1.50 m
Topography      :      1      (Flat/gentle slope; no barrier)
Reference angle  :    0.00

```

↑
Road data, segment # 6: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 0.00
Medium Truck % of Total Volume   : 7.00
Heavy Truck % of Total Volume    : 5.00
Day (16 hrs) % of Total Volume   : 92.00

```

Data for Segment # 6: Portobello (day/night)

```

-----
Angle1   Angle2       : 70.00 deg   90.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      5 / 5
House density    :     80 %
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height  :    1.50 / 1.50 m
Topography      :      1      (Flat/gentle slope; no barrier)
Reference angle  :    0.00

```

↑
Result summary (day)

```

-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+
1.Nates ! 1.50 ! 39.60 ! 39.60

```


2.Scala	!	1.50	!	37.72	!	37.72
3.Provence	!	1.50	!	31.21	!	31.21
4.Portobello	!	1.50	!	35.06	!	35.06
5.Portobello	!	1.50	!	57.54	!	57.54
6.Portobello	!	1.50	!	32.78	!	32.78
-----+-----+-----+-----						
Total						57.70 dBA

↑

Result summary (night)

	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
-----+-----+-----+-----						
1.Nates	!	1.50	!	32.01	!	32.01
2.Scala	!	1.50	!	30.12	!	30.12
3.Provence	!	1.50	!	23.62	!	23.62
4.Portobello	!	1.50	!	27.46	!	27.46
5.Portobello	!	1.50	!	49.94	!	49.94
6.Portobello	!	1.50	!	25.18	!	25.18
-----+-----+-----+-----						
Total						50.10 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.70
(NIGHT): 50.10

↑

↑

Filename: ola14.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Nates (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Nates (day/night)

Angle1 Angle2 : -55.00 deg 65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1 / 1
House density : 70 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 90.00 / 90.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Scala (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 8000

Percentage of Annual Growth	:	0.00
Number of Years of Growth	:	0.00
Medium Truck % of Total Volume	:	7.00
Heavy Truck % of Total Volume	:	5.00
Day (16 hrs) % of Total Volume	:	92.00

Data for Segment # 2: Scala (day/night)

Angle1	Angle2	:	-90.00 deg	45.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	5 / 5		
House density	:	60 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	290.00 / 290.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 3: Provence (day/night)

Car traffic volume	:	6477/563	veh/TimePeriod	*
Medium truck volume	:	515/45	veh/TimePeriod	*
Heavy truck volume	:	368/32	veh/TimePeriod	*
Posted speed limit	:	50 km/h		
Road gradient	:	1 %		
Road pavement	:	1	(Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT):	8000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 0.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 3: Provence (day/night)

Angle1	Angle2	:	-90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)	
No of house rows	:	3 / 3		
House density	:	60 %		
Surface	:	1	(Absorptive ground surface)	
Receiver source distance	:	500.00 / 500.00 m		
Receiver height	:	1.50 / 1.50 m		
Topography	:	1	(Flat/gentle slope; no barrier)	
Reference angle	:	0.00		

↑

Road data, segment # 4: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 4: Portobello (day/night)

Angle1 Angle2 : -90.00 deg -60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 4 / 4
House density : 80 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 5: Portobello (day/night)

Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 5: Portobello (day/night)

```

-----
Angle1   Angle2       : -60.00 deg   65.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      0 / 0
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height  :    1.50 / 1.50 m
Topography      :      1      (Flat/gentle slope; no barrier)
Reference angle  :    0.00

```

↑
Road data, segment # 6: Portobello (day/night)

```

-----
Car traffic volume : 19430/1690 veh/TimePeriod *
Medium truck volume : 1546/134 veh/TimePeriod *
Heavy truck volume : 1104/96 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 1 %
Road pavement      : 1 (Typical asphalt or concrete)

```

* Refers to calculated road volumes based on the following input:

```

24 hr Traffic Volume (AADT or SADT): 24000
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 0.00
Medium Truck % of Total Volume   : 7.00
Heavy Truck % of Total Volume    : 5.00
Day (16 hrs) % of Total Volume   : 92.00

```

Data for Segment # 6: Portobello (day/night)

```

-----
Angle1   Angle2       : 65.00 deg   90.00 deg
Wood depth      :      0      (No woods.)
No of house rows :      5 / 5
House density    :     60 %
Surface         :      1      (Absorptive ground surface)
Receiver source distance : 70.00 / 70.00 m
Receiver height  :    1.50 / 1.50 m
Topography      :      1      (Flat/gentle slope; no barrier)
Reference angle  :    0.00

```

↑
Result summary (day)

```

-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+
1.Nates ! 1.50 ! 46.00 ! 46.00

```

2.Scala	!	1.50	!	32.95	!	32.95
3.Provence	!	1.50	!	33.01	!	33.01
4.Portobello	!	1.50	!	37.17	!	37.17
5.Portobello	!	1.50	!	57.22	!	57.22
6.Portobello	!	1.50	!	36.66	!	36.66
-----+-----+-----+-----						
		Total				57.64 dBA

↑

Result summary (night)

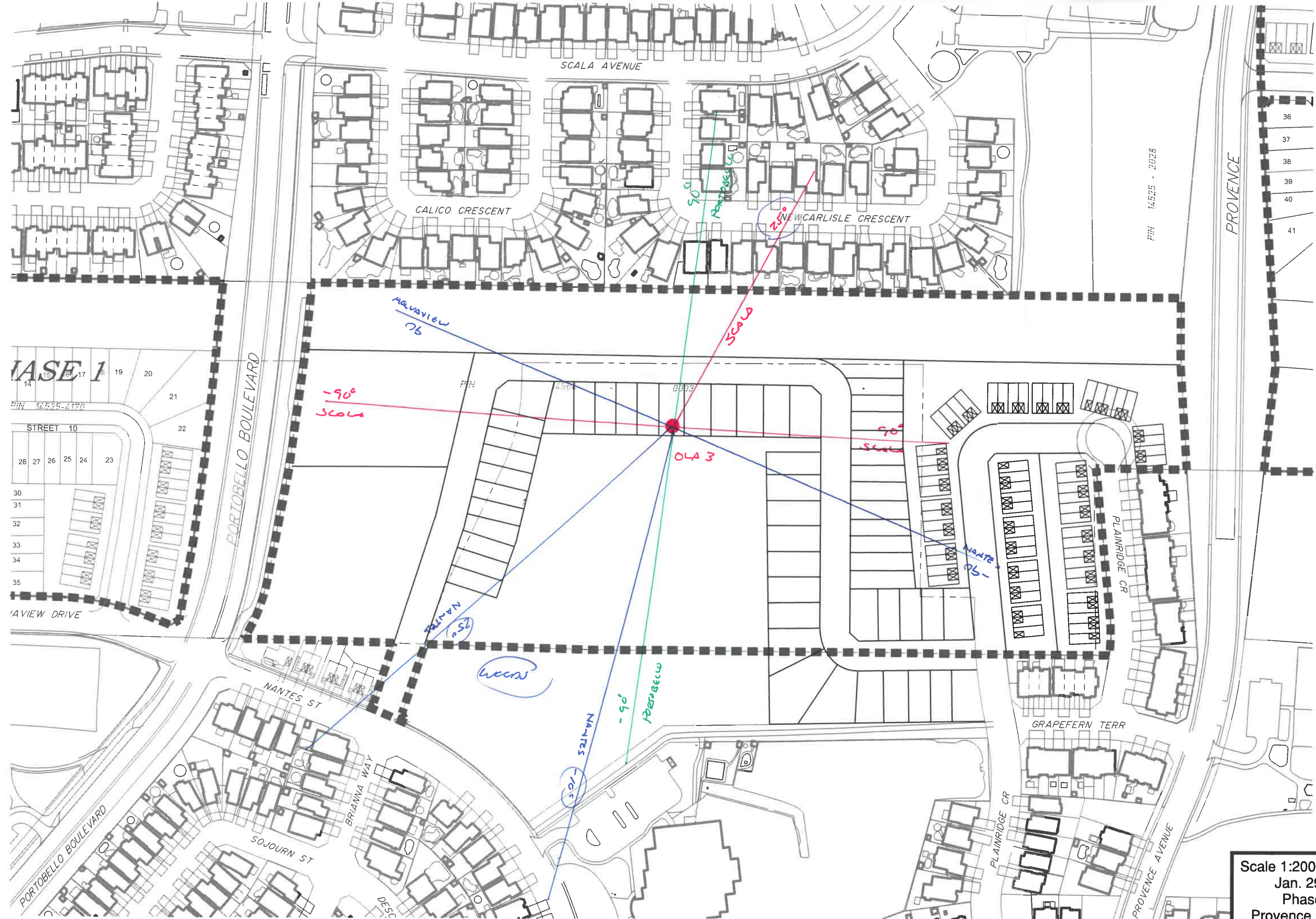
	!	source	!	Road	!	Total
	!	height	!	Leq	!	Leq
	!	(m)	!	(dBA)	!	(dBA)
-----+-----+-----+-----						
1.Nates	!	1.50	!	38.40	!	38.40
2.Scala	!	1.50	!	25.36	!	25.36
3.Provence	!	1.50	!	25.42	!	25.42
4.Portobello	!	1.50	!	29.57	!	29.57
5.Portobello	!	1.50	!	49.62	!	49.62
6.Portobello	!	1.50	!	29.06	!	29.06
-----+-----+-----+-----						
		Total				50.04 dBA

↑

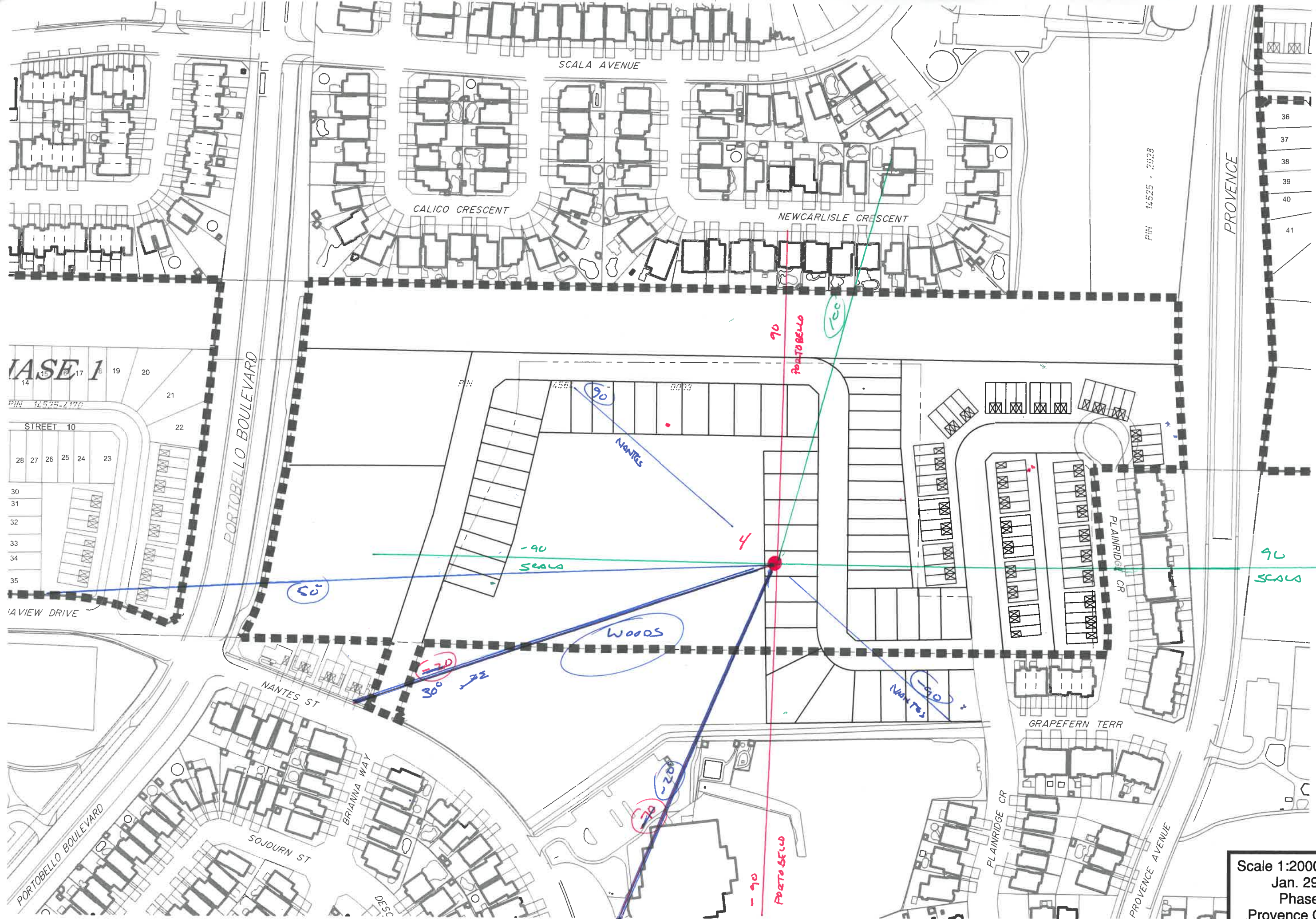
TOTAL Leq FROM ALL SOURCES (DAY): 57.64
(NIGHT): 50.04

↑

↑



Scale 1:2000 (11x17,
 Jan. 29/19
 Phase 6
 Provence Orleans



PIN 14525 - 2028

PROVENCE

- 36
- 37
- 38
- 39
- 40
- 41

PHASE 1

PIN 14525-2110

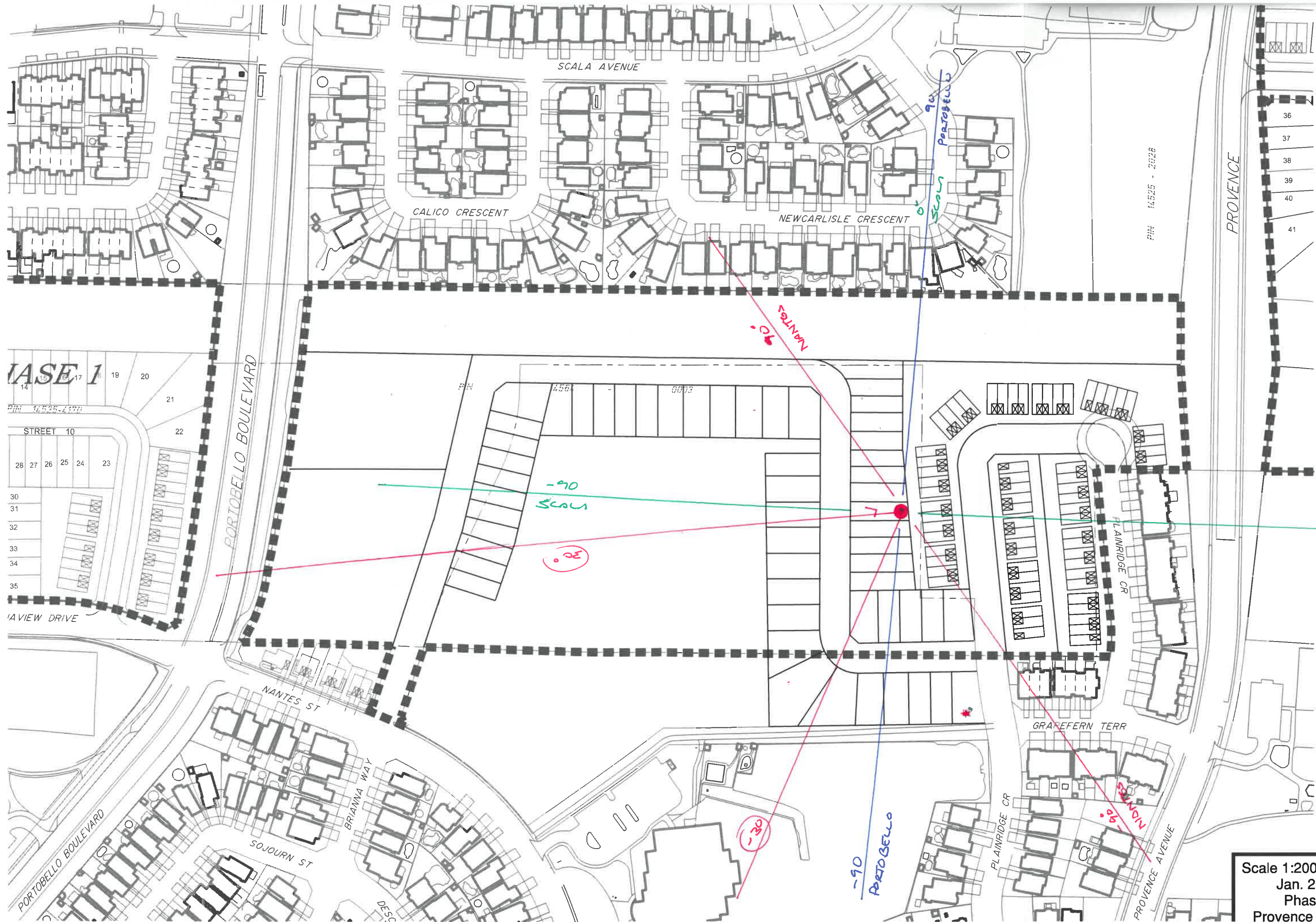
STREET 10

- 28
- 27
- 26
- 25
- 24
- 23

- 30
- 31
- 32
- 33
- 34
- 35

VIEW DRIVE

Scale 1:2000 (11x17)
Jan. 29/19
Phase 6
Provence Orleans



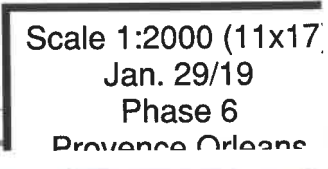
Scale 1:2000 (11x17)
Jan. 29/19
Phase 6
Providence Orleans



Scale 1:2000 (11x17)
Jan. 29/19
Phase 6
Provence Orleans

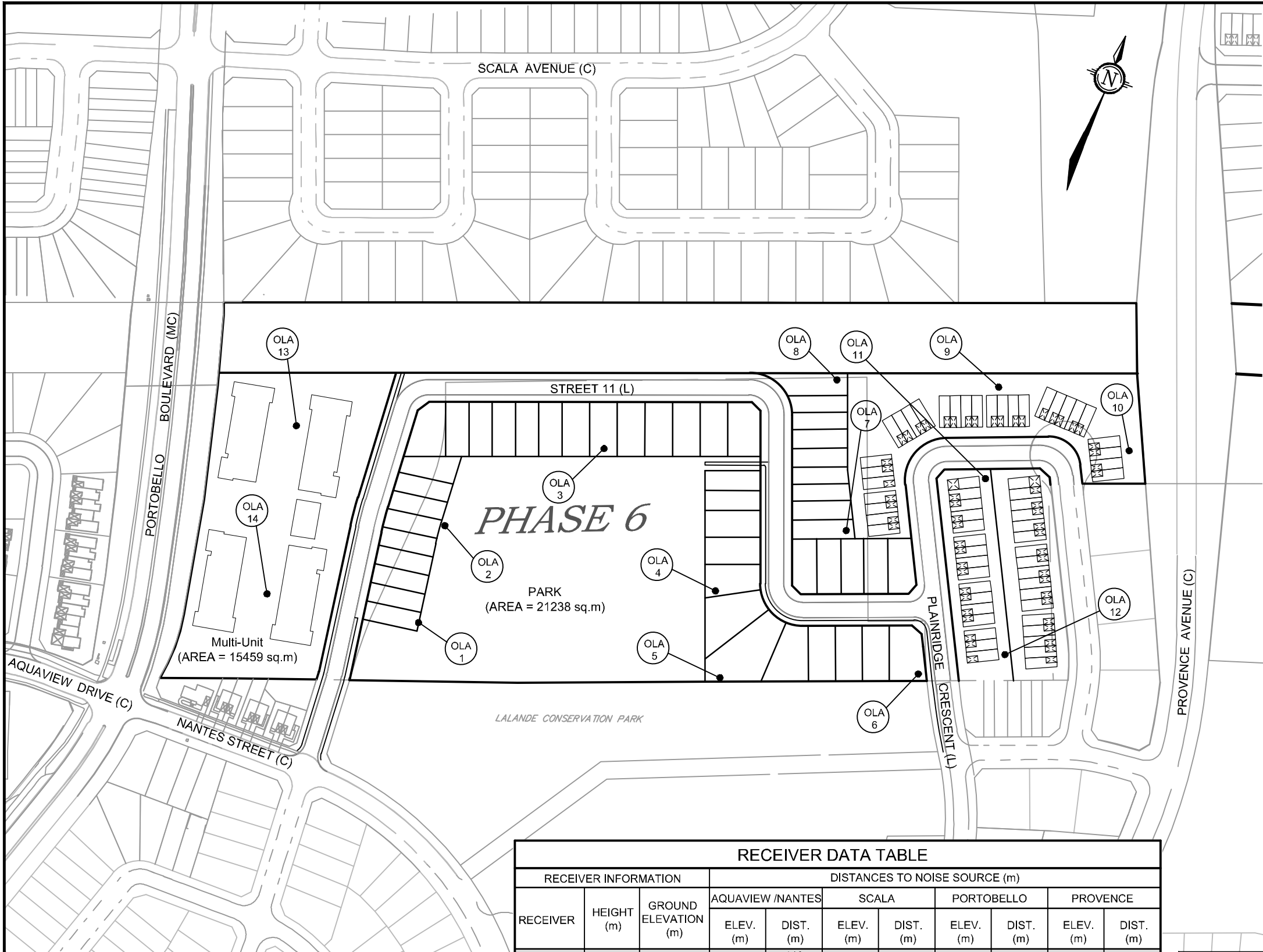






Appendix C Noise Control Plan

M:\2017\117155\CAD\Design\Figures\Noise\117155-NoiseControl - PH6.dwg, Figure - NC, Nov 01, 2019 - 3:05pm, mfang



LEGEND

- OLA 3 RECEIVER-OUTDOOR LIVING AREA (OLA)
- (A) ARTERIAL ROAD CLASSIFICATION
- (MC) MAJOR COLLECTOR ROAD CLASSIFICATION
- (C) COLLECTOR ROAD CLASSIFICATION
- (L) LOCAL ROAD CLASSIFICATION

NOTES:

- NOISE CONTROL PLAN TO BE READ IN CONJUNCTION WITH NOISE CONTROL FEASIBILITY STUDY (R-2019-172) PREPARED BY NOVATECH. REFER TO REPORT FOR THE TYPICAL WARNING CLAUSES TO BE REGISTERED ON TITLE AND PROPOSED NOISE MITIGATION MEASURES.
- ROADWAY CLASSIFICATION AS PER CITY OF OTTAWA OFFICIAL PLAN, SCHEDULE G, RURAL ROAD NETWORK.
- ANY ROAD NOT IDENTIFIED IS CONSIDERED LOCAL.

RECEIVER DATA TABLE										
RECEIVER INFORMATION			DISTANCES TO NOISE SOURCE (m)							
RECEIVER	HEIGHT (m)	GROUND ELEVATION (m)	AQUAVIEW /NANTES		SCALA		PORTOBELLO		PROVENCE	
			ELEV. (m)	DIST. (m)	ELEV. (m)	DIST. (m)	ELEV. (m)	DIST. (m)	ELEV. (m)	DIST. (m)
OLA 1	1.5	90.82	90.24	110	89.29	310	89.52	160	89.85	440
OLA 2	1.5	91.02	90.18	160	89.31	260	89.50	170	89.70	420
OLA 3	1.5	91.65	90.24	240	89.29	220	89.50	250	89.65	330
OLA 4	1.5	91.89	90.04	220	89.16	290	89.54	320	89.75	270
OLA 5	1.5	91.79	89.79	170	89.11	380	89.37	340	88.77	250
OLA 6	1.5	91.63	89.69	270	89.25	400	89.42	450	89.31	140
OLA 7	1.5	91.96	89.96	300	89.35	270	89.41	390	89.79	190
OLA 8	1.5	91.99	90.20	360	89.32	180	89.61	380	89.28	200
OLA 9	1.5	91.43	89.93	420	89.35	200	89.62	470	89.28	110
OLA 10	1.5	91.37	89.75	460	89.35	230	89.58	550	89.65	35
OLA 11	1.5	91.47	89.95	380	89.35	250	89.49	470	89.81	110
OLA 12	1.5	91.57	89.66	340	89.34	340	89.58	490	89.71	110
OLA 13	1.5	91.29	89.55	180	89.34	210	89.50	70	89.48	510
OLA 14	1.5	90.93	89.68	90	89.35	290	89.52	70	88.75	520



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Facsimile (613) 254-5867
Website www.novatech-eng.com

CITY OF OTTAWA
PROVENCE ORLEANS SUBDIVISION
(2128 TRIM ROAD)

NOISE CONTROL PLAN

SCALE 1:2500 0 25 50 75 100

DATE OCT 2019 JOB 117155 FIGURE 117155 - NC-2