



**REPORT**

**Airport Road Class EA**  
*Noise Impact Study*

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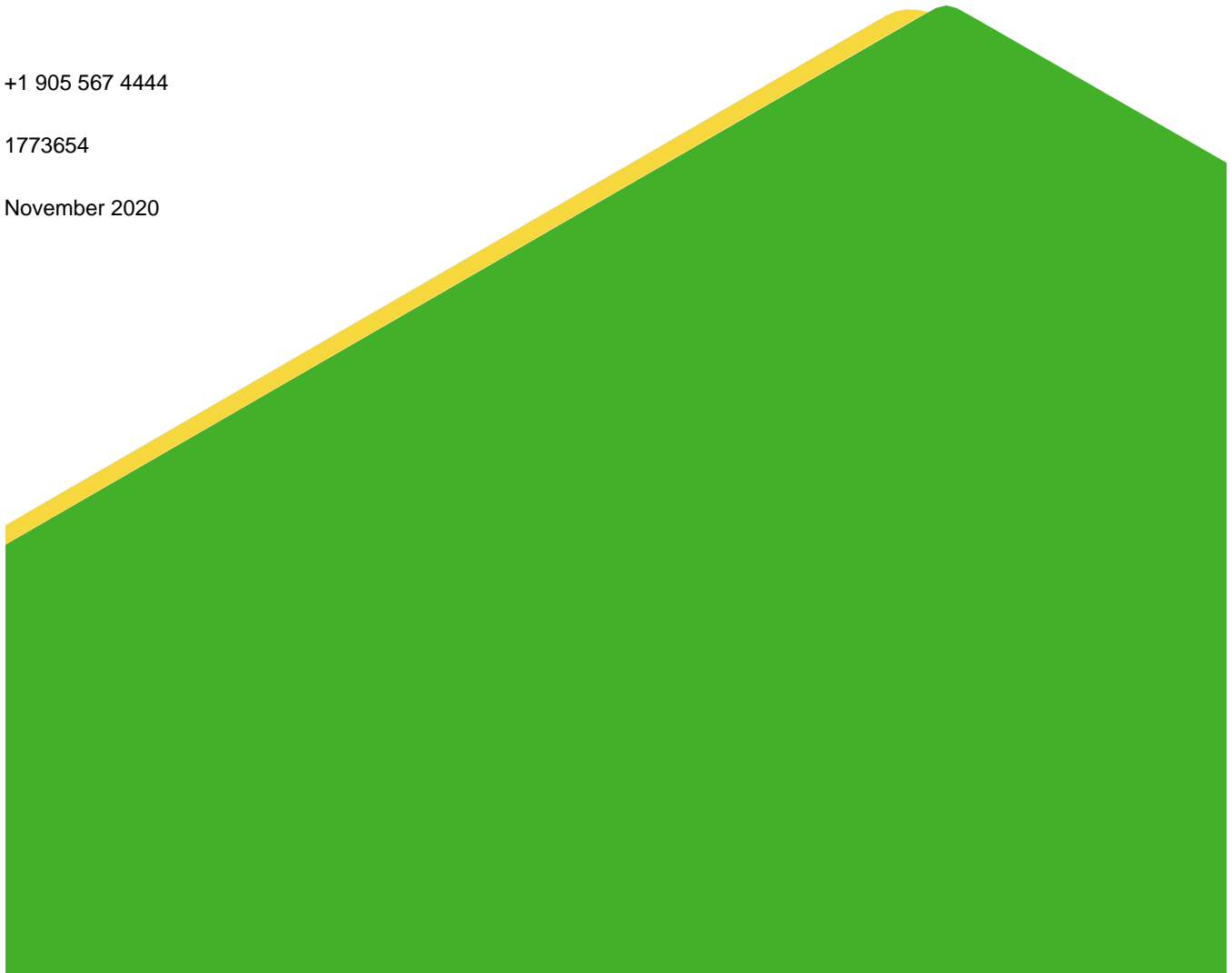
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## Distribution List

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# Table of Contents

<b>1.0 INTRODUCTION</b>	<b>1</b>
<b>2.0 PROJECT DESCRIPTION</b>	<b>2</b>
2.1 Existing Conditions	2
2.2 Proposed Future Conditions	2
<b>3.0 DESCRIPTION OF TECHNICAL TERMS</b>	<b>3</b>
<b>4.0 ASSESSMENT CRITERIA</b>	<b>4</b>
4.1 MECP/MTO Noise Protocol	4
4.2 Region of Peel’s Noise Policy and Acoustical Report Guideline	5
4.3 MTO’s Environmental Guide for Noise	6
<b>5.0 METHODOLOGY</b>	<b>7</b>
5.1 Area of Investigation	7
5.2 Noise Sensitive Areas	7
5.2.1 Noise Sensitive Areas Identification	7
5.3 Traffic Volumes	9
5.4 Noise Prediction Modelling	10
<b>6.0 RESULTS</b>	<b>12</b>
<b>7.0 CONSTRUCTION NOISE ASSESSMENT</b>	<b>14</b>
7.1 Construction Equipment and Activities	14
7.2 Noise Complaints Process	14
7.3 Applicable By-Laws	15
<b>8.0 CONCLUSIONS</b>	<b>16</b>

**TABLES**

Table 1: Applicable Guidance Documents ..... 4

Table 2: MECP/MTO Noise Protocol and Region’s Noise Policy Criteria Considered for Mitigation ..... 5

Table 3: Description of Representative OLAs for the Project ..... 8

Table 4: Summary of Traffic Data for Airport Road Used for the NIS ..... 10

Table 5: Summary of Predicted Road Traffic Noise Levels (Leq, 16 hours) ..... 12

**FIGURES**

- Figure 1: Site Location
- Figure 2: Zoning Map
- Figure 3: Site Layout

**APPENDICES**

**APPENDIX A**

Road Traffic Data

**APPENDIX B**

ORNAMENT Model Inputs

## 1.0 INTRODUCTION

HDR Inc. (HDR) retained Golder Associates Ltd. (Golder) to assess the potential noise impact of the proposed road widening of Airport Road (the Project) from Countryside Drive to Braydon Boulevard/Stonecrest Drive in the City of Brampton (the City), Region of Peel (the Region), Ontario. This Noise Impact Study (NIS) was prepared as supporting documentation for the Class Environmental Assessment (EA) being prepared for the proposed Project.

This report provides a summary of the NIS for the proposed Project on the neighbouring sensitive receptors. The report also identifies the applicable municipal noise by law, describes a noise complaint process for construction activities and provides a general discussion regarding noise arising from construction activities.

This NIS summarizes the analysis of the potential noise impacts of the Project on the existing acoustical environment, in accordance with the Ontario Ministry of Environment, Conservation and Parks (MECP (formally the MOE)) and Ministry of Transportation (MTO) document '*A Protocol for Dealing with Noise Concerns During the Preparation, Review, and Evaluation of Provincial Highways Environmental Assessments*' (MECP/MTO Noise Protocol) and supplemented accordingly with the MTO's *Environmental Guide for Noise* (MTO Noise Guide). Additional guidance was taken from the Region's *Corporate Policy W30-04 Noise Attenuation Barriers*, which was amended in 2016 by *Corporate Policy W30-04 Private Noise Attenuation Walls Conversion Policy* (the Region's Noise Policy).

## 2.0 PROJECT DESCRIPTION

As part of the Region's 2012 Updated Long Range Transportation Plan (LRTP), the Region is considering improvements to Airport Road. A Class EA is being carried out to address the potential environmental impact of the Project, which consists of widening Airport Road between Countryside Drive and Braydon Boulevard/Stonecrest Drive (the Project Site). An Area of Investigation for the NIS was defined as 600 m from the Project Right-of-Way (ROW). The Area of Investigation and Project ROW are shown on Figure 1.

### 2.1 Existing Conditions

Currently, Airport Road is a north-south, four lane regional road, located in the City of Brampton, Ontario. The surrounding land uses adjacent to the roadway are primarily residential and commercial. Figure 2 provides the zoning information surrounding the Project Site.

Existing acoustic barriers are located along the Project ROW within the Project Site and were considered in the NIS. An ArcGIS file was provided by HDR that outlined the locations and heights of the existing acoustic barriers. This information was supplemented with grading plans for the residential developments along Airport Road, also provided by HDR. The acoustic performance and current condition of any identified acoustic barrier was not quantified. The locations of existing acoustic barriers are shown in Figure 3.

### 2.2 Proposed Future Conditions

For the purposes of the NIS, it is understood the future proposed condition includes the widening of Airport Road from a four lane road to a six lane road. Remaining consistent with the other components of the EA, a future horizon year of 2031 was used in the assessment of future noise levels.

For the NIS, only existing sensitive land uses in the vicinity of the Project Site were evaluated. It is understood that there are no proposed future developments within the Project Site.

### 3.0 DESCRIPTION OF TECHNICAL TERMS

To help understand the analysis and recommendations made in this report, the following is a brief discussion of technical noise terms.

Sound pressure level is expressed on a logarithmic scale in units of decibels (dB). Since the scale is logarithmic, a sound that is twice the sound pressure level as another will be 3 dB higher.

The noise data and analysis in this report have been given in terms of frequency distribution. The levels are grouped into octave bands. Typically, the centre frequencies for each octave band are 31.5, 63, 125, 250, 500, 1000, 2000, 4000, and 8000 Hertz (Hz). The human ear responds to the pressure variations in the atmosphere that reach the ear drum. These pressure variations are composed of different frequencies that give each sound we hear its unique character.

It is common practice to sum sound levels over the entire audible spectrum (i.e., 20 Hz to 20 kHz) to give an overall sound level. However, to approximate the hearing response of humans, each octave band measured has a weighting applied to it. The resulting "A weighted" sound level is often used as a criterion to indicate a maximum allowable sound level. In general, low frequencies are weighted higher, as human hearing is less sensitive to low frequency sound.

Environmental noise levels vary over time and are described using an overall sound level as the  $L_{eq}$ , or energy averaged sound level. The  $L_{eq}$  is the equivalent continuous sound level, which in a stated time and at a stated location, has the same energy as the time varying noise level. It is common practice to measure  $L_{eq}$  sound levels in order to obtain a representative average sound level.

## 4.0 ASSESSMENT CRITERIA

The guidance documents and policies identified in Table 1 are applicable for providing the criteria and additional guidance for the assessment of noise from road traffic for this Project.

**Table 1: Applicable Guidance Documents**

Governing Body	Guidance Document	Intended Use
Ontario Ministry of Environment / Ontario Ministry of Transportation	A Protocol for Dealing with Noise Concerns During the Preparation, Review, and Evaluation of Provincial Highways Environmental Assessments (MECP/MTO Noise Protocol). February 1986.	Roadways
Region of Peel	Corporate Policy W30-04 Noise Attenuation Barriers, June 1996. Amended by Corporate Policy W30-04 Private Noise Attenuation Walls Conversion Policy, October 2016. (Region's Noise Policy).	Roadways
Region of Peel	General Guidelines for the Preparation of Acoustical Reports in the Region of Peel (Region's Acoustical Report Guideline)	New Residential Developments
Ontario Ministry of Transportation	Environmental Guide for Noise (MTO Noise Guide). October 2006.	Roadways

### 4.1 MECP/MTO Noise Protocol

The MECP/MTO Noise Protocol provides requirements for noise mitigation relating to the construction of new or the expansion of existing roadways in Ontario. Noise assessments typically consider average noise levels over a given averaging period. An averaging period is not clearly stated in the MECP/MTO Noise Protocol but is generally considered over the daytime period. Other guidance documents (i.e., the Region's Noise Policy and the MTO Noise Guide) use a 16-hour daytime average between 07:00 and 23:00. The MECP/MTO Noise Protocol states that the objective for outdoor sound levels is either 55 dBA or the existing ambient. If noise increases above ambient by more than 5 dBA, mitigation should be investigated. Mitigation should be considered along the ROW and should achieve a minimum of 5 dBA of attenuation, if administratively, economically, and technically feasible.

According to the MECP/MTO Noise Protocol, future traffic conditions are to be analysed based on 10-year traffic projections after the completion of construction. As described in Section 2.2, a future horizon year of 2031 has been considered representative of 10 years post-construction.



## 4.2 Region of Peel's Noise Policy and Acoustical Report Guideline

The Region's Noise Policy is intended for local improvement or barrier retrofit. The Project is a capital works project and it is Golder's understanding that the Region applies this policy to capital works projects. The Region's 1996 Noise Policy states that only existing residential sites with reversed frontage and experiencing a daytime noise level equivalent (Leq, 16 hours from 7:00 a.m. to 11:00 p.m.) of 60 dBA or greater shall be considered for retrofit noise attenuation barriers. In June 2011 and August 2015, the Region carried out additional reviews of the Region's Noise Policy, specifically the Local Improvement process and on September 10, 2015, under Resolution 2015 663, Regional Council endorsed a program to rebuild and relocate private noise attenuation walls located on private property that are adjacent to Regional roads onto the property line bounding the Regional road, funded in full by the Region. This is known as the Private Noise Attenuation Walls Conversion Policy, which is the latest addendum to the Region's Noise Policy. The policy applies to private noise attenuation walls in existence as of September 10, 2015 and is estimated to take 30 years to complete. According to the Region's Noise Policy's latest addendum, the Region will participate only in noise attenuation walls designed in accordance with current technology to give a minimum anticipated noise attenuation of 5 dB. In situations where there is a capital works project planned to widen a Regional road and construct Regional noise attenuation walls, any affected private noise attenuation walls will be removed as part of the capital works regardless of the condition of the walls.

The Region's Acoustical Report Guideline is understood to be intended for new residential developments and therefore was only referenced for supporting information such as the location of receivers and typical noise wall heights.

A combination of the MECP/MTO Noise Protocol and the Region's Noise Policy has been applied as the assessment criteria for noise sensitive uses for the Project. Table 2 below summarizes the criterion considered for noise mitigation in this NIS.

**Table 2: MECP/MTO Noise Protocol and Region's Noise Policy Criteria Considered for Mitigation**

Predicted Conditions (a, b, c)	Mitigation Effort Required
$\leq 55$ dBA future with the Project OR $\leq 5$ dB increase due to the Project and $< 60$ dBA future with the Project	None
$> 55$ dBA future with the Project and $> 5$ dB increase due to the Project OR $\geq 60$ dBA future with the Project	Introduce noise control measures along the property line of the ultimate ROW, immediately adjacent to the road or private property if necessary, where technically and economically appropriate. Noise control measures, where introduced, should achieve a minimum of 5 dB attenuation, in the outdoor living areas of affected properties

(a) Values represent average levels established over the daytime period (07:00 to 23:00).

(b) Calculated noise levels based on projected future traffic counts for 10 years post-construction.

(c) Future noise levels with the Project compared with future noise levels without the Project to determine change due to the Project.

### 4.3 MTO's Environmental Guide for Noise

Some additional considerations were made for consistency with provincial guidance from the MTO Noise Guide, which provides requirements for noise assessments and mitigation relating to the construction of new or the expansion of existing Provincial Highways. The MTO Noise Guide provides detailed noise analysis methodology, which formed the basis of this NIS.

The MTO Noise Guide provides criteria for the requirement of noise mitigation efforts, but as described in Section 4.1 and 4.2, the MECP/MTO Noise Protocol and the Region's Noise Policy criteria for noise mitigation were adopted for this NIS. Consideration was only given to properties with outdoor areas directly abutting the Project ROW.

The following Environmental Protection Requirement (EPR) for noise according to the *MTO Environmental Protection Requirements Section 6* relates to noise during construction:

**NOISE-2** *Highway construction shall be undertaken in a manner to minimize noise levels and identify a process for dealing with public complaints during construction. Pile driving and blasting operations shall be in accordance with Ontario Provincial Standard Specifications (OPSS 120) and Ministry of the Environment Publication NPC-119.*

## 5.0 METHODOLOGY

The following methodology was carried out to assess the potential noise impacts due to the Project:

- identification of the Area of Investigation;
- identification of Noise Sensitive Areas (NSAs) and Outdoor Living Areas (OLAs);
- determination of future noise levels without the Project;
- determination of future noise levels with the Project;
- determination of potential noise impact;
- determination of significance; and
- assessment of mitigation, if required.

### 5.1 Area of Investigation

The Area of Investigation defines an area surrounding the Project Site where potential noise effects are assessed at sensitive receptor locations. As discussed in Section 2.0, the Area of Investigation for this NIS is defined as 600 m from the Project ROW, along Airport Road between Countryside Drive and Braydon Boulevard/Stonecrest Drive. Figure 1 illustrates the Area of Investigation.

### 5.2 Noise Sensitive Areas

In assessing potential noise effects, NSAs and respective OLAs (i.e., receiver locations) were identified within the Area of Investigation. The Region's Noise Policy considers existing residential properties with rear yards or side yards abutting a Regional road. It does not define the receiver location (i.e., OLA) for assessment purposes but does identify locations where noise mitigation may be located. According to the MTO Noise Guide, an OLA is defined as an area at ground level within an NSA which accommodates outdoor living activities.

The MTO Noise Guide defines the receiver location (i.e., OLA) at 1.2 m above ground, at a distance of 3 m from the dwelling unit at the most exposed side. The Region's Acoustical Report Guideline identifies the height of a receiver location to be 1.5 m above the ground at a point located 3.0 m from the rear wall of the dwelling unit. This guideline is not explicit to which side of the dwelling unit is to be assessed, but it is implied the rear or side lot abutting Regional roads shall be considered. A receiver height of 1.5 m is consistent with other widely accepted methodologies and Golder's recent experience on similar MTO and Region projects and is consistent with the MECP requirements.

Therefore, for the purposes of this NIS, representative OLAs located at residential property NSAs having a portion of the backyard or side yard abutting Airport Road within the Area of Investigation were assessed. The representative OLAs were assessed at a height of 1.5 m and 3 m from the centre of the rear building façade.

#### 5.2.1 Noise Sensitive Areas Identification

Figure 1 illustrates the Project Site and Area of Investigation developed for completing the NIS. Figure 2 illustrates the land use designation adjacent to the Project Site, within the Area of Investigation. The surrounding lands are primarily residential and commercial.

NSAs within the Area of Investigation were identified as described above and representative NSAs were selected for further consideration. Representative NSAs were identified at residences with backyards or side yards that were directly adjacent to the Project ROW, at approximately every fifth residence in the case of a row of similar dwellings. Consequently, 30 representative NSAs and associated OLAs were identified within the Area of Investigation.

Table 3 summarizes the identified representative OLAs and provides the corresponding address, UTM coordinates and base elevations. Base elevations were determined from grading plans for the associated residential development provided by HDR. Where the grading plans were not available for a particular OLA, the elevations were determined from the City's Elevation Points dataset, publicly available through their geoHUB website. Table 3 also states whether each OLA has an existing acoustic barrier protecting the property from noise emissions from Airport Road. These OLAs and existing acoustic barrier locations are identified in Figure 3.

**Table 3: Description of Representative OLAs for the Project**

OLA ID	Address	Existing Acoustic Barrier?	OLA UTM Coordinates (Zone 17)		
			Easting	Northing	Elevation
			(m)	(m)	(masl)
OLA01	73 Donwoods Court	Yes	600722	4848533	225
OLA02	83 Donwoods Court	Yes	600775	4848476	224
OLA03	26 Hillson Court	Yes	600820	4848443	224
OLA04	74 Footbridge Crescent	Yes	600821	4848328	224
OLA05	16 Hillson Court	Yes	600875	4848382	223
OLA06	2 Treeline Boulevard	Yes	600923	4848328	222
OLA07	40 Summitgreen Crescent	Yes	600936	4848210	222
OLA08	1 Treeline Boulevard	Yes	600977	4848282	222
OLA09	24 Allanhurst Crescent	Yes	601036	4848217	220
OLA10	66 Kettlewell Crescent	Yes	601056	4848098	220
OLA11	14 Allanhurst Crescent	Yes	601084	4848169	219
OLA12	2 Brock Drive	Yes	601127	4848128	218
OLA13	1 Brock Drive	Yes	601179	4848076	218
OLA14	16 Cogswell Crescent	Yes	601227	4848024	217
OLA15	24 Cogswell Crescent	Yes	601267	4847985	216
OLA16	1 Camrose Street	Yes	601290	4847863	216
OLA17	83 Eagle Trace Drive	Yes	601343	4847802	214
OLA18	59 Whitwell Drive	Yes	601351	4847924	215
OLA19	69 Whitwell Drive	Yes	601397	4847857	214

OLA ID	Address	Existing Acoustic Barrier?	OLA UTM Coordinates (Zone 17)		
			Easting	Northing	Elevation
			(m)	(m)	(masl)
OLA20	79 Whitwell Drive	Yes	601448	4847806	213
OLA21	1 Eagle Plains Drive	Yes	601488	4847661	213
OLA22	12 Small Court	Yes	601524	4847757	213
OLA23	6 Small Court	Yes	601582	4847708	213
OLA24	34 Northface Crescent	Yes	601589	4847553	214
OLA25	40 Castle Mountain Drive	Yes	601657	4847498	213
OLA26	40 Colt Lane	Yes	601659	4847614	213
OLA27	30 Colt Lane	Yes	601704	4847556	213
OLA28	50 Castle Mountain Drive	Yes	601708	4847433	213
OLA29	22 Colt Lane	Yes	601743	4847517	213
OLA30	14 Colt Lane	Yes	601783	4847477	212

masl = metres above sea level.

### 5.3 Traffic Volumes

Future noise levels with and without the Project were calculated using 2031 Average Annual Daily Traffic (AADT) data provided by HDR. The daytime and nighttime breakdown of the traffic volume was assumed to be consistent with the MTO approved Ontario Road Noise Analysis Method (ORNAMENT) manual. Information on the vehicle classification (automobile, medium truck and heavy truck (described below)) percentage breakdown of the traffic volume was provided by HDR.

The MTO definition of vehicle classes is as follows:

- **Automobiles:** All vehicles having two axles and four wheels designed primarily for the transportation of nine or fewer passengers or the transportation of cargo (e.g. vans and light trucks). Generally, the gross vehicle weight is less than 4,500 kg.
- **Medium trucks:** All vehicles having two axles and six wheels designed for the transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kg but less than 12,000 kg. City buses are also included in this category.
- **Heavy trucks:** All vehicles having three or more axles and designed for the transportation of cargo. Generally, the gross vehicle weight is greater than 12,000 kg. Intercity buses are also included in this category.

Future traffic data with and without the Project is summarized in Table 4. Appendix A summarizes all traffic data considered in the NIS.

**Table 4: Summary of Traffic Data for Airport Road Used for the NIS**

Parameter	Value
AADT (2031, Without Project)	36,000(a)
AADT (2031, With Project)	42,000(a)
Speed Limit (km/hr)	70
Automobile / Medium Truck / Heavy Truck Breakdown	92% / 4% / 4%
Daytime / Nighttime Breakdown	90% / 10%

(a) Total AADT was divided evenly across all lanes of traffic for the purposes of the NIS.

## 5.4 Noise Prediction Modelling

The MTO approved ORNAMENT prediction methodology was used to predict noise levels at the representative OLAs identified in Section 5.2 for both future with and future without the Project. All predictions were carried out for the daytime period (07:00 to 23:00), which represents a 16 hour equivalent sound level ( $L_{eq, 16 \text{ hours}}$ ).

An investigation into noise mitigation was completed if future noise levels with the Project were predicted to be 60 dBA or greater at an OLA, or if future noise levels without the Project were greater than 55 dBA and the change in noise levels due to the Project was greater than 5 dB. Noise predictions were undertaken for two scenarios: 1) future (2031) with the Project, and 2) future (2031) without the Project.

In addition to including traffic volumes and respective traffic breakdowns for the roadway, the following additional inputs were considered for modelling:

- locations and extents of dwellings at an NSA providing shielding to a portion of the OLA (i.e. for homes side-flanked by Airport Road);
- locations and extents of existing acoustic barriers, as discussed in Section 2.1;
- angle of exposure from the roadway to the OLA;
- perpendicular distance between the roadway and the OLA;
- topography changes between the roadway and the OLA;
- pavement type;
- type of surface between roadway and the OLA (i.e. hard versus soft ground);
- road grades;
- relative source and OLA heights; and
- posted speed limit.

Appendix B summarizes all ORNAMENT modelling inputs.

Following a conservative approach, the prediction modelling did not consider the potential attenuation due to the presence of any woodlots or existing privacy fencing between a roadway and a representative OLA. The NIS considers traffic to be predominantly free flowing along the Project roadways and does not include specific inputs for vehicles accelerating or decelerating. A more comprehensive assessment approach can be used at the detailed design stage, which can include certain acoustic effects of traffic flow controls.

## 6.0 RESULTS

Following the methodology described in Section 5.0, noise prediction modelling was completed using the ORNAMENT prediction model. Table 5 summarizes the potential noise impact results at the identified representative OLAs.

**Table 5: Summary of Predicted Road Traffic Noise Levels ( $L_{eq}$ , 16 hours)**

OLA ID	Predicted Daytime Outdoor Noise Level (dBA) for 2031 Without the Project	Predicted Daytime Outdoor Noise Level (dBA) for 2031 with the Project	Change in Noise Level (dB)	Existing Acoustic Barrier?	Barrier Recommended?
OLA01	55	56	1	Y	N
OLA02	55	56	1	Y	N
OLA03	53	53	0	Y	N
OLA04	58	59	1	Y	N
OLA05	58	59	1	Y	N
OLA06	58	59	1	Y	N
OLA07	59	60	1	Y	N
OLA08	60	61	1	Y	N
OLA09	57	58	1	Y	N
OLA10	60	61	1	Y	N
OLA11	57	58	1	Y	N
OLA12	56	57	1	Y	N
OLA13	57	58	1	Y	N
OLA14	57	58	1	Y	N
OLA15	58	58	0	Y	N
OLA16	59	60	1	Y	N
OLA17	58	59	1	Y	N
OLA18	61	62	1	Y	N
OLA19	57	57	0	Y	N
OLA20	59	60	1	Y	N
OLA21	59	60	1	Y	N
OLA22	59	60	1	Y	N
OLA23	63	63	0	Y	N
OLA24	61	61	0	Y	N
OLA25	61	62	1	Y	N
OLA26	59	60	1	Y	N



OLA ID	Predicted Daytime Outdoor Noise Level (dBA) for 2031 Without the Project	Predicted Daytime Outdoor Noise Level (dBA) for 2031 with the Project	Change in Noise Level (dB)	Existing Acoustic Barrier?	Barrier Recommended?
OLA27	59	60	1	Y	N
OLA28	60	61	1	Y	N
OLA29	59	60	1	Y	N
OLA30	60	60	0	Y	N

Based on the results in Table 5, it is expected the Project will result in a change in noise levels of up to 1 dB at all representative OLAs. Predicted future road traffic noise levels with the Project are expected to be 60 dBA or greater at 16 representative OLAs. However, all representative OLAs are protected by existing acoustic barriers, and therefore no additional barriers are considered.

In accordance with the Region's Noise Policy, existing acoustic barriers that are currently located on private property, adjacent to Regional roads, will be rebuilt and relocated onto the property line abutting the Regional property. Consideration of the Region's conversion of private noise attenuation walls is not within the scope of this Class EA, however the results in Table 5 indicate that some of the existing acoustic barriers require upgrades (e.g., increase in height) such that the target level of 60 dBA is met. When the existing acoustic barriers are to be rebuilt, the results of this NIS can be used to identify which acoustic barriers require upgrades to meet 60 dBA at the OLAs (i.e., the acoustic barriers associated with OLA07, OLA08, OLA10, OLA16, OLA18, and OLA20 through OLA30).

## 7.0 CONSTRUCTION NOISE ASSESSMENT

The construction phase of any project is typically considered temporary or short term relative to the entire life cycle of a project. The following is a summary of the items to be considered relating to construction noise according to the MTO Noise Guide.

### 7.1 Construction Equipment and Activities

As construction noise could impact receptors in the vicinity of the Project Site, some general recommendations to assist in minimizing noise impacts due to the Project's construction equipment and activities are provided below:

- All construction equipment should be properly maintained according to manufacturer's recommendations and be in accordance MECP Model Municipal Noise Control by-law (i.e., NPC-115, etc.).
- If any of the construction activities involve Piling or Blasting, they will need to be carried out in accordance with OPSS 120 and MECP NPC-119.
- Construction equipment and/or activities typically known to be of annoyance (e.g., piling) should consider some of the following:
  - limit operating time within the daytime period when ambient noise levels are expected to be higher;
  - maintain an acceptable setback distance from the identified nearby NSAs;
  - carry out additional noise studies or monitoring program to verify and document noise levels;
  - implement temporary acoustic barriers or other localized noise mitigation measures; and
  - investigate other alternative construction equipment or processes to complete the task.

### 7.2 Noise Complaints Process

A process for dealing with noise complaints during the construction phase is required. Noise complaints are usually received directly from the complainant or a municipal by-law officer. Note that compliance with noise guidelines or regulations does not ensure noise complaints will not occur. The following is a general recommended process dealing with noise complaints based on Golder's past project experiences:

- Identify an individual or group on the Project (i.e., Site Supervisor, Health and Safety representative, etc.) to handle the noise complaints and someone that can be easily contacted.
- Document the noise complaint. Include the date, time and the individual's contact information from whom the noise complaint was received. Specific information such as the location, duration, time and type of sound heard (i.e., steady, impulsive, etc.) should be included as it will assist in the investigation process. Be aware of any time constraints put in place by the municipality for the noise complaint to be addressed.
- Investigate the noise complaint and identify the source of the noise complaint. Document the investigation.
- If the noise complaint is justified, in that excessive noise levels were generated, minimize or eliminate the source of the noise complaint. Document the action taken.
- Follow up with the complainant and provide the results of the noise complaint investigation.

### 7.3 Applicable By-Laws

Golder reviewed applicable by-laws to investigate the requirements for a noise by-law exemption for proposed Project activities. Generally, each regulating jurisdiction has a by-law dealing with noise, with often slightly differing by-law requirements. The jurisdiction with by-law authority in the vicinity of the Project is the City of Brampton.

Through an initial review of the City of Brampton's Noise By-law No. 93-84, noise resulting from road work and road improvements on behalf of the Region is permitted and is not considered an infringement under this bylaw.

## 8.0 CONCLUSIONS

The Noise Impact Study provides a summary of the potential noise impacts of the proposed extension to Airport Road from Countryside Drive to Braydon Boulevard/Stonecrest Drive on the neighbouring sensitive receptors and identifies the applicable municipal noise by-law, describes a noise complaint process for construction activities, and provides a general discussion regarding noise arising from construction activities.

Based on the Noise Impact Study carried out by Golder Associates Ltd. for HDR Inc., the following conclusions were determined:

- The Project does not result in a change in predicted noise levels exceeding the 5 dB threshold of the MECP/MTO Noise Protocol at any representative OLA. The future noise levels with the Project exceed the 60 dBA threshold of the Region's Noise Policy at 16 OLAs.
- All OLAs identified within the Project Site with rear or side yards that abut the Project ROW have existing acoustic barriers, and therefore further mitigation is not considered as part of the Project.
- When these existing acoustic barriers are replaced as part of the Region's Noise Policy, the results of this assessment can be used to identify acoustic barriers that require upgrades (e.g., increase in height) to meet the target level of 60 dBA.
- An outline regarding construction noise, a noise complaint process and the applicable noise by-law during the construction phase of the Project has been provided.

## Signature Page

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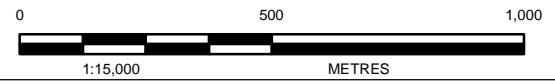
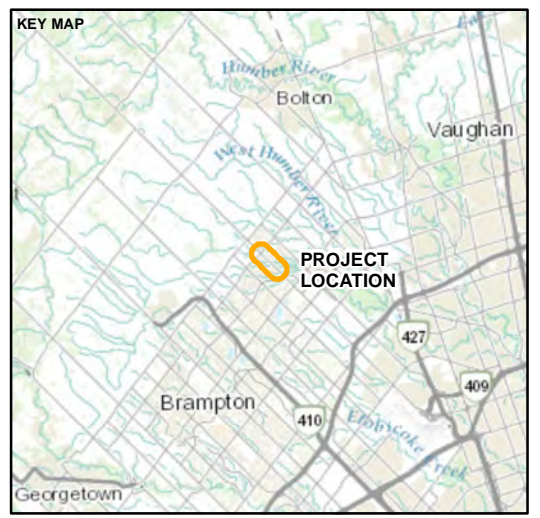
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**FIGURES**



- LEGEND**
- PROJECT RIGHT-OF-WAY
  - AREA OF INVESTIGATION
  - WATERCOURSE
  - WATERBODY
  - WETLAND



**REFERENCE(S)**  
 BASE DATA - MNR LIO, OBTAINED 2018.  
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 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT  
**HDR INC.**

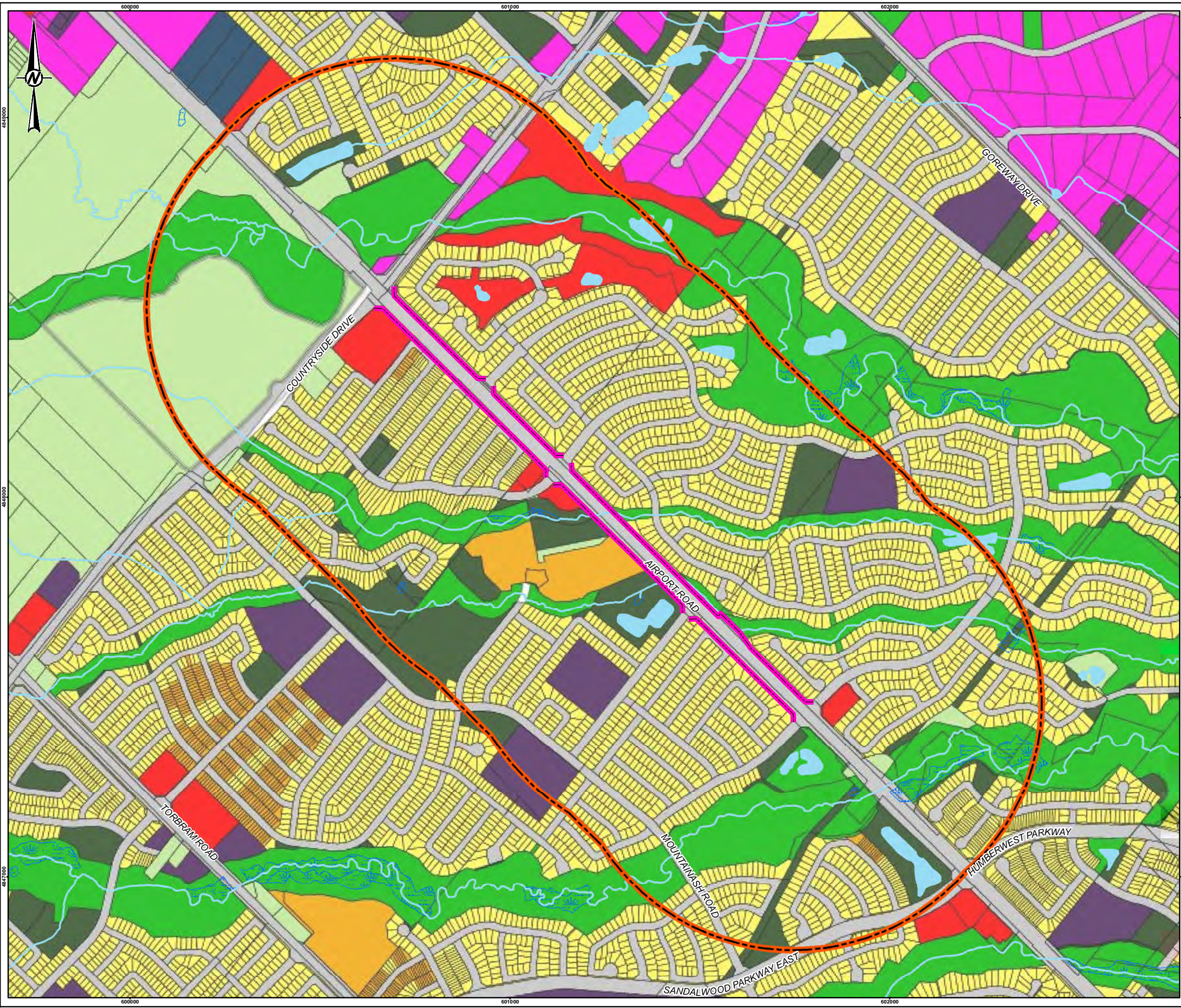
PROJECT  
**MUNICIPAL CLASS EA AIRPORT ROAD NOISE IMPACT ASSESSMENT**

TITLE  
**SITE LOCATION**

CONSULTANT	YYYY-MM-DD	2018-10-16
<b>GOLDER</b>	DESIGNED	JT
	PREPARED	JT
	REVIEWED	SD
	APPROVED	JT

PROJECT NO. 1773654	CONTROL 0001	REV. 0.0	FIGURE 1
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PATH: S:\Client\EA\Airport\_Road\98\_PRCO\1773654\_HDR\_ClassEA\Brampton\AD\_PRCO\0001\_Note\1773654-0001\_RN-001.mxd PRINTED ON: 2020-10-29 AT: 11:00:03 AM  
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- LEGEND**
- PROJECT RIGHT-OF-WAY
  - AREA OF INVESTIGATION
  - WATERCOURSE
  - WATERBODY
  - WETLAND
- ZONING**
- AGRICULTURAL
  - COMMERCIAL
  - FLOOD PLAIN
  - INDUSTRIAL
  - OPEN SPACE
  - RESIDENTIAL - SINGLE/SEMI
  - RESIDENTIAL - MEDIUM DENSITY
  - RESIDENTIAL - OTHER
  - ROADS/PUBLIC OWNERSHIP



**REFERENCE(S)**  
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 BASE IMAGE - GEOREFERENCED IM IMAGE TAKEN FROM THE CITY OF BARMPTON WEBSITE.  
 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT  
 HDR INC.

PROJECT  
 MUNICIPAL CLASS EA AIRPORT ROAD NOISE IMPACT ASSESSMENT

TITLE  
 ZONING MAP

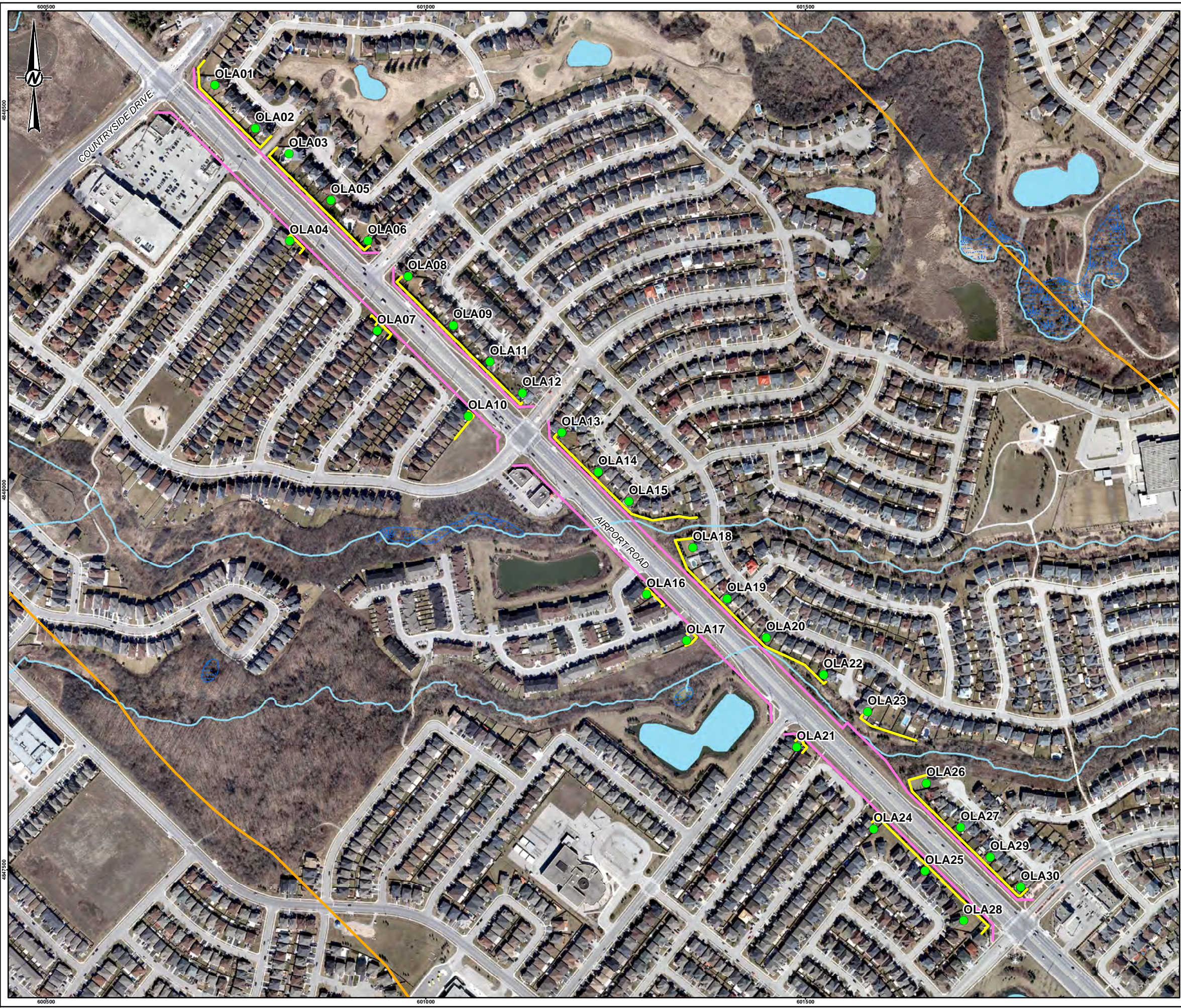
CONSULTANT	YYYY-MM-DD	2018-10-16
DESIGNED	JT	
PREPARED	JT	
REVIEWED	SD	
APPROVED	JT	

PROJECT NO. 1773654 CONTROL 0001 REV. 0.0 FIGURE 2

PATH: S:\Client\EA\Airport\_Road\189\_PRCO\1773654\_HDR\_Client\EA\Barmpton\189\_PRCO\0001\_Note\1773654-0001\_PRCO\0001.mxd PRINTED ON: 2020-10-29 AT: 11:10:27 AM

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- LEGEND**
- REPRESENTATIVE OUTDOOR LIVING AREAS
  - EXISTING ACOUSTIC BARRIERS
  - PROJECT RIGHT-OF-WAY
  - AREA OF INVESTIGATION
  - WATERCOURSE
  - ▭ WATERBODY
  - ▨ WETLAND



**REFERENCE(S)**  
 BASE DATA - MNR LIO, OBTAINED 2018.  
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 IMAGERY - FIRST BASE SOLUTIONS  
 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT  
 HDR INC.

PROJECT  
 MUNICIPAL CLASS EA AIRPORT ROAD NOISE IMPACT ASSESSMENT

TITLE  
 SITE LAYOUT

CONSULTANT	YYYY-MM-DD	2018-10-16
DESIGNED	JT	
PREPARED	JT	
REVIEWED	SD	
APPROVED	JT	

PROJECT NO. 1773654	CONTROL 0001	REV. 0.0	FIGURE 3
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PATH: S:\Client\EA\Airport\_Road\98\_PRCO\1773654\_HDR\_ClientEA\Barringer\01\_PRCO\0001\_Note\1773654-0001\_PRCO\0001.mxd PRINTED ON: 2020-10-29 AT: 11:12:20 AM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

**APPENDIX A**

**Road Traffic Data**

**Appendix A:  
Traffic Modelling Inputs**

ALIGNMENT	LIMITS	ROAD SEGMENT ID	SPEED	FUTURE DATA WITHOUT THE PROJECT							FUTURE DATA WITH THE PROJECT						
				AADT	YEAR	DAYTIME %	NIGHTTIME %	% TRUCKS (COMMERCIAL)	% MEDIUM TRUCKS	% HEAVY TRUCKS	AADT	YEAR	DAYTIME %	NIGHTTIME %	% TRUCKS (COMMERCIAL)	% MEDIUM TRUCKS	% HEAVY TRUCKS
Airport Road	North of Countryside Drive Northbound 1	S01a	70	9000	2031	90%	10%	8%	4%	4%	10500	2031	90%	10%	8%	4%	4%
Airport Road	North of Countryside Drive Southbound 1	S01b	70	9000	2031	90%	10%	8%	4%	4%	10500	2031	90%	10%	8%	4%	4%
Airport Road	North of Countryside Drive Northbound 2	S01c	70	9000	2031	90%	10%	8%	4%	4%	10500	2031	90%	10%	8%	4%	4%
Airport Road	North of Countryside Drive Southbound 2	S01d	70	9000	2031	90%	10%	8%	4%	4%	10500	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Northbound 1	S02a	70	9000	2031	90%	10%	8%	4%	4%	7000	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Southbound 1	S02b	70	9000	2031	90%	10%	8%	4%	4%	7000	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Northbound 2	S02c	70	9000	2031	90%	10%	8%	4%	4%	7000	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Southbound 2	S02d	70	9000	2031	90%	10%	8%	4%	4%	7000	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Northbound 3	S02e	70	—	—	—	—	—	—	—	7000	2031	90%	10%	8%	4%	4%
Airport Road	Countryside Drive to South of Stonecrest Dr / Braydon Blvd Southbound 3	S02f	70	—	—	—	—	—	—	—	7000	2031	90%	10%	8%	4%	4%

**Note: Daytime (16 Hours) – 07:00 to 23:00. Nighttime (8 Hours) – 23:00 to 07:00**

**APPENDIX B**

**ORNAMENT Model Inputs**

Future without the Project

ORNAMENT Road Traffic Noise Predi S01a

Airport Road North of Countryside Drive

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	53	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	65	0	53	90	2.2	17	224.93	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	75	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	135	0	75	90	2.2	13	224.93	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	77	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	190	0	77	90	2.2	20	224.93	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	269	0	-90	-82	2.2	6	224.93	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	270	0	82	90	2.2	16	224.93	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	341	0	85	90	2.2	12	224.93	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	434	0	-90	-85	2.2	10	224.93	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	412	0	85	90	2.2	16	224.93	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	499	0	86	90	2.2	12	224.93	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	37	597	0	0	0	0.0	5	224.93	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	567	0	0	0	0.0	12	224.93	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	626	0	0	0	0.0	12	224.93	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	699	0	0	0	0.0	12	224.93	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	770	0	0	0	0.0	9	224.93	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	826	0	0	0	0.0	9	224.93	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	928	0	0	0	0.0	6	224.93	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1009	0	0	0	0.0	12	224.93	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	929	0	0	0	0.0	19	224.93	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1008	0	0	0	0.0	9	224.93	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1080	0	0	0	0.0	9	224.93	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1211	0	0	0	0.0	11	224.93	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	1169	0	0	0	0.0	8	224.93	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	1245	0	0	0	0.0	12	224.93	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	1359	0	0	0	0.0	15	224.93	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	1445	0	0	0	0.0	7	224.93	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1365	0	0	0	0.0	21	224.93	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	1438	0	0	0	0.0	11	224.93	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	1528	0	0	0	0.0	18	224.93	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1493	0	0	0	0.0	10	224.93	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1550	0	0	0	0.0	11	224.93	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S01b

Airport Road North of Countryside Drive

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	47	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	71	0	47	90	2.2	17	224.89	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	71	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	138	0	71	90	2.2	13	224.89	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	74	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	193	0	74	90	2.2	20	224.89	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	268	0	-90	-84	2.2	6	224.89	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	80	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	272	0	80	90	2.2	16	224.89	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	342	0	82	90	2.2	12	224.89	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	433	0	-90	-86	2.2	10	224.89	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	413	0	84	90	2.2	16	224.89	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	500	0	85	90	2.2	12	224.89	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	596	0	0	0	0	5	224.89	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	567	0	0	0	0	12	224.89	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	627	0	0	0	0	12	224.89	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	700	0	0	0	0	12	224.89	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	770	0	0	0	0	9	224.89	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	826	0	0	0	0	9	224.89	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	928	0	0	0	0	6	224.89	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	1008	0	0	0	0	12	224.89	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	58	930	0	0	0	0	19	224.89	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1008	0	0	0	0	9	224.89	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1081	0	0	0	0	9	224.89	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1210	0	0	0	0	11	224.89	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	1170	0	0	0	0	8	224.89	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	66	1245	0	0	0	0	12	224.89	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	1358	0	0	0	0	15	224.89	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	1445	0	0	0	0	7	224.89	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	1365	0	0	0	0	21	224.89	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1438	0	0	0	0	11	224.89	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1527	0	0	0	0	18	224.89	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1494	0	0	0	0	10	224.89	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1550	0	0	0	0	11	224.89	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S01c

Airport Road North of Countryside Drive

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	56	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	63	0	56	90	2.2	17	224.92	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	76	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	134	0	76	90	2.2	13	224.92	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	78	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	189	0	78	90	2.2	20	224.92	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-81	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	269	0	-90	-81	2.2	6	224.92	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	83	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	269	0	83	90	2.2	16	224.92	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	341	0	85	90	2.2	12	224.92	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	434	0	-90	-84	2.2	10	224.92	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	411	0	85	90	2.2	16	224.92	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	499	0	86	90	2.2	12	224.92	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	597	0	0	0	0.0	5	224.92	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	566	0	0	0	0.0	12	224.92	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	626	0	0	0	0.0	12	224.92	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	699	0	0	0	0.0	12	224.92	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	770	0	0	0	0.0	9	224.92	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	825	0	0	0	0.0	9	224.92	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	928	0	0	0	0.0	6	224.92	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	1009	0	0	0	0.0	12	224.92	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	929	0	0	0	0.0	19	224.92	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	1008	0	0	0	0.0	9	224.92	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	1080	0	0	0	0.0	9	224.92	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1211	0	0	0	0.0	11	224.92	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	1169	0	0	0	0.0	8	224.92	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	1245	0	0	0	0.0	12	224.92	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	1359	0	0	0	0.0	15	224.92	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	1445	0	0	0	0.0	7	224.92	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	1365	0	0	0	0.0	21	224.92	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1438	0	0	0	0.0	11	224.92	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	1527	0	0	0	0.0	18	224.92	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1493	0	0	0	0.0	10	224.92	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1549	0	0	0	0.0	11	224.92	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S01d

Airport Road North of Countryside Drive

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	45	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	74	0	45	90	2.2	17	224.84	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	69	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	139	0	69	90	2.2	13	224.84	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	73	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	194	0	73	90	2.2	20	224.84	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	268	0	-90	-84	2.2	6	224.84	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	80	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	272	0	80	90	2.2	16	224.84	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	343	0	82	90	2.2	12	224.84	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	433	0	-90	-86	2.2	10	224.84	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	83	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	413	0	83	90	2.2	16	224.84	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	500	0	85	90	2.2	12	224.84	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	23	596	0	0	0	0	5	224.84	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	568	0	0	0	0	12	224.84	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	627	0	0	0	0	12	224.84	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	700	0	0	0	0	12	224.84	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	771	0	0	0	0	9	224.84	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	826	0	0	0	0	9	224.84	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	928	0	0	0	0	6	224.84	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1008	0	0	0	0	12	224.84	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	61	930	0	0	0	0	19	224.84	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1009	0	0	0	0	9	224.84	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1081	0	0	0	0	9	224.84	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	1211	0	0	0	0	11	224.84	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	64	1170	0	0	0	0	8	224.84	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	70	1246	0	0	0	0	12	224.84	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	1358	0	0	0	0	15	224.84	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	1445	0	0	0	0	7	224.84	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	57	1366	0	0	0	0	21	224.84	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	1439	0	0	0	0	11	224.84	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	1527	0	0	0	0	18	224.84	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1494	0	0	0	0	10	224.84	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1550	0	0	0	0	11	224.84	212.45	212.78	506	92.00%	4.00%	4.00%



Future without the Project

ORNAMENT Road Traffic Noise Predi S02a

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	53	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	53	2.2	17	224.91	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	75	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	36	0	-90	75	2.2	13	224.29	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	77	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	77	2.2	20	223.78	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-82	90	2.2	6	222.72	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	82	2.2	16	222.71	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	85	2.2	12	221.76	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-85	90	2.2	10	221.00	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	85	2.2	16	221.15	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	86	2.2	12	220.10	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	37	37	0	-90	90	2.2	5	219.03	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	12	219.29	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	12	218.63	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	12	217.59	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	9	216.61	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	215.91	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	90	2.2	6	215.04	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	12	213.84	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	19	215.04	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	213.84	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	212.76	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.15	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	50	0	-90	90	2.2	8	212.18	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	56	0	-90	90	2.2	12	212.30	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	15	212.88	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	90	2.2	7	212.61	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	21	212.88	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	11	212.63	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	90	2.2	18	212.16	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	10	212.30	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	11	212.06	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S02b

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	47	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	47	2.2	17	224.97	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	71	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	71	2.2	13	224.39	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	74	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	74	2.2	20	223.80	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-84	90	2.2	6	222.79	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	80	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	80	2.2	16	222.74	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	82	2.2	12	221.76	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-86	90	2.2	10	220.97	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	84	2.2	16	221.15	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	85	2.2	12	220.10	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	5	218.99	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	12	219.30	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	12	218.65	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	12	217.61	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-90	90	2.2	9	216.65	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	215.96	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	6	215.08	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	12	213.85	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	58	58	0	-90	90	2.2	19	215.07	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	213.86	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	212.81	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	11	212.19	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	60	0	-90	90	2.2	8	212.23	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	66	66	0	-90	90	2.2	12	212.36	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	90	2.2	15	212.87	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	7	212.63	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	90	2.2	21	212.87	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.66	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	18	212.18	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	10	212.32	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.09	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S02c

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	56	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	36	0	-90	56	2.2	17	224.79	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	76	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	76	2.2	13	224.23	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	78	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	78	2.2	20	223.69	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-81	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-81	90	2.2	6	222.64	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	83	2.2	16	222.62	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	85	2.2	12	221.69	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-84	90	2.2	10	220.91	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	85	2.2	16	221.05	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	86	2.2	12	219.99	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-90	90	2.2	5	218.97	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	219.21	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	218.55	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	217.52	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	216.50	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	215.78	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	6	214.94	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	213.72	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	19	214.94	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	29	0	-90	90	2.2	9	213.72	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	212.63	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	11	212.07	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	8	212.09	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	90	2.2	12	212.23	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	90	2.2	15	212.77	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	7	212.48	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	90	2.2	21	212.77	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	11	212.51	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	55	0	-90	90	2.2	18	212.07	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	10	212.23	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	11	211.95	212.45	212.78	506	92.00%	4.00%	4.00%

Future without the Project

ORNAMENT Road Traffic Noise Predi S02d

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

OLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	MMT	RHT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	45	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	45	2.2	17	224.89	224.56	226.72	506	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	69	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	69	2.2	13	224.40	224.21	226.35	506	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	73	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	56	0	-90	73	2.2	20	223.71	223.80	227.03	506	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-84	90	2.2	6	222.68	223.58	224.28	506	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	80	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	80	2.2	16	222.66	222.74	223.41	506	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	82	2.2	12	221.67	222.06	222.86	506	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-86	90	2.2	10	220.84	221.75	222.13	506	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	83	2.2	16	221.02	221.65	221.38	506	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	85	2.2	12	219.95	220.13	221.28	506	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	23	23	0	-90	90	2.2	5	218.92	220.35	220.44	506	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	219.19	219.32	220.60	506	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	218.57	218.45	220.23	506	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	12	217.54	218.14	219.32	506	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	216.56	217.16	218.46	506	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	215.86	216.49	217.47	506	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-90	90	2.2	6	214.99	216.26	216.76	506	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	12	213.72	214.14	214.88	506	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	61	61	0	-90	90	2.2	19	214.98	214.77	214.11	506	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	213.73	214.25	215.65	506	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	212.70	213.26	213.80	506	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	29	0	-90	90	2.2	11	212.13	213.15	213.58	506	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	64	64	0	-90	90	2.2	8	212.16	212.90	212.21	506	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	70	70	0	-90	90	2.2	12	212.31	213.08	210.21	506	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	15	212.75	213.63	213.00	506	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	7	212.52	213.46	213.17	506	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	57	57	0	-90	90	2.2	21	212.74	212.56	212.99	506	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	11	212.55	212.60	213.32	506	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	90	2.2	18	212.10	213.46	212.67	506	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	10	212.26	212.50	213.19	506	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	11	212.01	212.45	212.78	506	92.00%	4.00%	4.00%

Appendix B:  
ORNAMENT Model Inputs

Future With the Project

ORNAMENT Road Traffic Noise Predi S01a

Airport Road North of Countryside Drive

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	53	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	65	0	53	90	2.2	17	224.93	224.56	226.72	591	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	75	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	135	0	75	90	2.2	13	224.93	224.21	226.35	591	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	77	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	190	0	77	90	2.2	20	224.93	223.80	227.03	591	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	269	0	-90	-82	2.2	6	224.93	223.58	224.28	591	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	270	0	82	90	2.2	16	224.93	222.74	223.41	591	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	341	0	85	90	2.2	12	224.93	222.06	222.86	591	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	434	0	-90	-85	2.2	10	224.93	221.75	222.13	591	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	412	0	85	90	2.2	16	224.93	221.65	221.38	591	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	499	0	86	90	2.2	12	224.93	220.13	221.28	591	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	37	597	0	0	0	0.0	5	224.93	220.35	220.44	591	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	567	0	0	0	0.0	12	224.93	219.32	220.60	591	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	626	0	0	0	0.0	12	224.93	218.45	220.23	591	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	699	0	0	0	0.0	12	224.93	218.14	219.32	591	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	770	0	0	0	0.0	9	224.93	217.16	218.46	591	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	826	0	0	0	0.0	9	224.93	216.49	217.47	591	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	928	0	0	0	0.0	6	224.93	216.26	216.76	591	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1009	0	0	0	0.0	12	224.93	214.14	214.88	591	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	929	0	0	0	0.0	19	224.93	214.77	214.11	591	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1008	0	0	0	0.0	9	224.93	214.25	215.65	591	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1080	0	0	0	0.0	9	224.93	213.26	213.80	591	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1211	0	0	0	0.0	11	224.93	213.15	213.58	591	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	1169	0	0	0	0.0	8	224.93	212.90	212.21	591	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	1245	0	0	0	0.0	12	224.93	213.08	210.21	591	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	1359	0	0	0	0.0	15	224.93	213.63	213.00	591	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	1445	0	0	0	0.0	7	224.93	213.46	213.17	591	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1365	0	0	0	0.0	21	224.93	212.56	212.99	591	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	1438	0	0	0	0.0	11	224.93	212.60	213.32	591	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	1528	0	0	0	0.0	18	224.93	213.46	212.67	591	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1493	0	0	0	0.0	10	224.93	212.50	213.19	591	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1550	0	0	0	0.0	11	224.93	212.45	212.78	591	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S01b

Airport Road North of Countryside Drive

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	47	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	71	0	47	90	2.2	17	224.89	224.56	226.72	591	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	71	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	138	0	71	90	2.2	13	224.89	224.21	226.35	591	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	74	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	193	0	74	90	2.2	20	224.89	223.80	227.03	591	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	268	0	-90	-84	2.2	6	224.89	223.58	224.28	591	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	80	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	272	0	80	90	2.2	16	224.89	222.74	223.41	591	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	342	0	82	90	2.2	12	224.89	222.06	222.86	591	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	433	0	-90	-86	2.2	10	224.89	221.75	222.13	591	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	413	0	84	90	2.2	16	224.89	221.65	221.38	591	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	500	0	85	90	2.2	12	224.89	220.13	221.28	591	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	596	0	0	0	0.0	5	224.89	220.35	220.44	591	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	567	0	0	0	0.0	12	224.89	219.32	220.60	591	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	627	0	0	0	0.0	12	224.89	218.45	220.23	591	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	700	0	0	0	0.0	12	224.89	218.14	219.32	591	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	770	0	0	0	0.0	9	224.89	217.16	218.46	591	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	826	0	0	0	0.0	9	224.89	216.49	217.47	591	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	928	0	0	0	0.0	6	224.89	216.26	216.76	591	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	1008	0	0	0	0.0	12	224.89	214.14	214.88	591	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	58	930	0	0	0	0.0	19	224.89	214.77	214.11	591	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1008	0	0	0	0.0	9	224.89	214.25	215.65	591	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1081	0	0	0	0.0	9	224.89	213.26	213.80	591	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	1210	0	0	0	0.0	11	224.89	213.15	213.58	591	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	1170	0	0	0	0.0	8	224.89	212.90	212.21	591	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	66	1245	0	0	0	0.0	12	224.89	213.08	210.21	591	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	1358	0	0	0	0.0	15	224.89	213.63	213.00	591	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	1445	0	0	0	0.0	7	224.89	213.46	213.17	591	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	1365	0	0	0	0.0	21	224.89	212.56	212.99	591	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1438	0	0	0	0.0	11	224.89	212.60	213.32	591	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	1527	0	0	0	0.0	18	224.89	213.46	212.67	591	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1494	0	0	0	0.0	10	224.89	212.50	213.19	591	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	1550	0	0	0	0.0	11	224.89	212.45	212.78	591	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S01c

Airport Road North of Countryside Drive

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	56	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	63	0	56	90	2.2	17	224.92	224.56	226.72	591	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	76	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	134	0	76	90	2.2	13	224.92	224.21	226.35	591	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	78	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	189	0	78	90	2.2	20	224.92	223.80	227.03	591	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-81	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	269	0	-90	-81	2.2	6	224.92	223.58	224.28	591	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	83	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	269	0	83	90	2.2	16	224.92	222.74	223.41	591	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	341	0	85	90	2.2	12	224.92	222.06	222.86	591	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	434	0	-90	-84	2.2	10	224.92	221.75	222.13	591	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	411	0	85	90	2.2	16	224.92	221.65	221.38	591	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	499	0	86	90	2.2	12	224.92	220.13	221.28	591	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	597	0	0	0	0.0	5	224.92	220.35	220.44	591	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	566	0	0	0	0.0	12	224.92	219.32	220.60	591	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	626	0	0	0	0.0	12	224.92	218.45	220.23	591	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	699	0	0	0	0.0	12	224.92	218.14	219.32	591	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	770	0	0	0	0.0	9	224.92	217.16	218.46	591	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	825	0	0	0	0.0	9	224.92	216.49	217.47	591	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	928	0	0	0	0.0	6	224.92	216.26	216.76	591	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	1009	0	0	0	0.0	12	224.92	214.14	214.88	591	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	929	0	0	0	0.0	19	224.92	214.77	214.11	591	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	1008	0	0	0	0.0	9	224.92	214.25	215.65	591	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	1080	0	0	0	0.0	9	224.92	213.26	213.80	591	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1211	0	0	0	0.0	11	224.92	213.15	213.58	591	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	1169	0	0	0	0.0	8	224.92	212.90	212.21	591	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	1245	0	0	0	0.0	12	224.92	213.08	210.21	591	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	1359	0	0	0	0.0	15	224.92	213.63	213.00	591	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	1445	0	0	0	0.0	7	224.92	213.46	213.17	591	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	1365	0	0	0	0.0	21	224.92	212.56	212.99	591	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1438	0	0	0	0.0	11	224.92	212.60	213.32	591	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	1527	0	0	0	0.0	18	224.92	213.46	212.67	591	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1493	0	0	0	0.0	10	224.92	212.50	213.19	591	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	1549	0	0	0	0.0	11	224.92	212.45	212.78	591	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S01d

Airport Road North of Countryside Drive

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	45	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	74	0	45	90	2.2	17	224.84	224.56	226.72	591	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	69	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	139	0	69	90	2.2	13	224.84	224.21	226.35	591	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	73	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	194	0	73	90	2.2	20	224.84	223.80	227.03	591	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	268	0	-90	-84	2.2	6	224.84	223.58	224.28	591	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	80	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	272	0	80	90	2.2	16	224.84	222.74	223.41	591	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	343	0	82	90	2.2	12	224.84	222.06	222.86	591	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	-86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	433	0	-90	-86	2.2	10	224.84	221.75	222.13	591	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	83	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	413	0	83	90	2.2	16	224.84	221.65	221.38	591	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	500	0	85	90	2.2	12	224.84	220.13	221.28	591	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	23	596	0	0	0	0.0	5	224.84	220.35	220.44	591	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	568	0	0	0	0.0	12	224.84	219.32	220.60	591	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	627	0	0	0	0.0	12	224.84	218.45	220.23	591	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	700	0	0	0	0.0	12	224.84	218.14	219.32	591	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	771	0	0	0	0.0	9	224.84	217.16	218.46	591	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	826	0	0	0	0.0	9	224.84	216.49	217.47	591	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	928	0	0	0	0.0	6	224.84	216.26	216.76	591	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	1008	0	0	0	0.0	12	224.84	214.14	214.88	591	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	61	930	0	0	0	0.0	19	224.84	214.77	214.11	591	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1009	0	0	0	0.0	9	224.84	214.25	215.65	591	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	1081	0	0	0	0.0	9	224.84	213.26	213.80	591	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	1211	0	0	0	0.0	11	224.84	213.15	213.58	591	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	64	1170	0	0	0	0.0	8	224.84	212.90	212.21	591	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	70	1246	0	0	0	0.0	12	224.84	213.08	210.21	591	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	1358	0	0	0	0.0	15	224.84	213.63	213.00	591	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	1445	0	0	0	0.0	7	224.84	213.46	213.17	591	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	57	1366	0	0	0	0.0	21	224.84	212.56	212.99	591	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	1439	0	0	0	0.0	11	224.84	212.60	213.32	591	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	1527	0	0	0	0.0	18	224.84	213.46	212.67	591	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1494	0	0	0	0.0	10	224.84	212.50	213.19	591	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	0	0	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	1550	0	0	0	0.0	11	224.84	212.45	212.78	591	92.00%	4.00%	4.00%



Future With the Project

ORNAMENT Road Traffic Noise Predi S02a

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	53	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	53	2.2	17	224.91	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	75	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	36	0	-90	75	2.2	13	224.29	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	77	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	77	2.2	20	223.78	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-82	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-82	90	2.2	6	222.72	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	82	2.2	16	222.71	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	85	2.2	12	221.76	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-85	90	2.2	10	221.00	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	85	2.2	16	221.15	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	86	2.2	12	220.10	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	37	37	0	-90	90	2.2	5	219.03	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	12	219.29	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	12	218.63	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	12	217.59	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	9	216.61	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	215.91	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	90	2.2	6	215.04	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	12	213.84	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	19	215.04	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	213.84	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	9	212.76	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.15	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	50	0	-90	90	2.2	8	212.18	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	56	0	-90	90	2.2	12	212.30	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	15	212.88	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	90	2.2	7	212.61	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	21	212.88	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	34	34	0	-90	90	2.2	11	212.63	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	90	2.2	18	212.16	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	10	212.30	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	11	212.06	212.45	212.78	394	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S02b

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	47	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	47	2.2	17	224.97	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	71	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	71	2.2	13	224.39	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	74	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	74	2.2	20	223.80	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-84	90	2.2	6	222.79	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	80	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	80	2.2	16	222.74	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	82	2.2	12	221.76	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-86	90	2.2	10	220.97	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	84	2.2	16	221.15	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	85	2.2	12	220.10	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	5	218.99	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	12	219.30	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	12	218.65	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	12	217.61	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-90	90	2.2	9	216.65	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	215.96	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	6	215.08	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	12	213.85	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	58	58	0	-90	90	2.2	19	215.07	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	213.86	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	9	212.81	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	33	33	0	-90	90	2.2	11	212.19	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	60	0	-90	90	2.2	8	212.23	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	66	66	0	-90	90	2.2	12	212.36	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	39	39	0	-90	90	2.2	15	212.87	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	7	212.63	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	90	2.2	21	212.87	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.66	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	18	212.18	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	10	212.32	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	11	212.09	212.45	212.78	394	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S02c

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	56	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	36	0	-90	56	2.2	17	224.79	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	76	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	76	2.2	13	224.23	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	78	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	78	2.2	20	223.69	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-81	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-81	90	2.2	6	222.64	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	83	2.2	16	222.62	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	85	2.2	12	221.69	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-84	90	2.2	10	220.91	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	85	2.2	16	221.05	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	86	2.2	12	219.99	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-90	90	2.2	5	218.97	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	219.21	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	218.55	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	31	31	0	-90	90	2.2	12	217.52	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	216.50	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	215.78	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	42	42	0	-90	90	2.2	6	214.94	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	213.72	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	19	214.94	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	29	0	-90	90	2.2	9	213.72	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	9	212.63	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	11	212.07	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	8	212.09	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	90	2.2	12	212.23	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	90	2.2	15	212.77	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	7	212.48	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	40	40	0	-90	90	2.2	21	212.77	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	11	212.51	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	55	0	-90	90	2.2	18	212.07	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	10	212.23	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	30	30	0	-90	90	2.2	11	211.95	212.45	212.78	394	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S02d

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	45	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	45	2.2	17	224.89	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	69	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	69	2.2	13	224.40	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	73	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	56	0	-90	73	2.2	20	223.71	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-84	90	2.2	6	222.68	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	80	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	80	2.2	16	222.66	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	82	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	82	2.2	12	221.67	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-86	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-86	90	2.2	10	220.84	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	83	2.2	16	221.02	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	85	2.2	12	219.95	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	23	23	0	-90	90	2.2	5	218.92	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	219.19	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	12	218.57	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	12	217.54	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	216.56	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	215.86	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-90	90	2.2	6	214.99	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	12	213.72	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	61	61	0	-90	90	2.2	19	214.98	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	213.73	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	9	212.70	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	29	0	-90	90	2.2	11	212.13	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	64	64	0	-90	90	2.2	8	212.16	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	70	70	0	-90	90	2.2	12	212.31	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	15	212.75	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	7	212.52	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	57	57	0	-90	90	2.2	21	212.74	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	11	212.55	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	38	38	0	-90	90	2.2	18	212.10	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	10	212.26	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	46	46	0	-90	90	2.2	11	212.01	212.45	212.78	394	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S02e

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	58	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	58	2.2	17	224.68	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	77	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	29	29	0	-90	77	2.2	13	224.16	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	79	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	36	36	0	-90	79	2.2	20	223.62	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-81	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-81	90	2.2	6	222.57	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	83	2.2	16	222.55	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	86	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	86	2.2	12	221.63	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-84	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-84	90	2.2	10	220.83	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	85	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	85	2.2	16	220.96	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	87	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	87	2.2	12	219.88	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	44	44	0	-90	90	2.2	5	218.91	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	12	219.13	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	12	218.49	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	12	217.45	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	24	24	0	-90	90	2.2	9	216.40	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-90	90	2.2	9	215.68	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	45	45	0	-90	90	2.2	6	214.84	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	90	2.2	12	213.61	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	41	41	0	-90	90	2.2	19	214.84	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	26	26	0	-90	90	2.2	9	213.61	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-90	90	2.2	9	212.52	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	50	0	-90	90	2.2	11	212.00	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	43	43	0	-90	90	2.2	8	212.00	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	12	212.16	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	55	0	-90	90	2.2	15	212.68	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	47	47	0	-90	90	2.2	7	212.38	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	37	37	0	-90	90	2.2	21	212.68	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	27	27	0	-90	90	2.2	11	212.42	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	58	58	0	-90	90	2.2	18	211.99	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	26	26	0	-90	90	2.2	10	212.16	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	26	26	0	-90	90	2.2	11	211.86	212.45	212.78	394	92.00%	4.00%	4.00%

Future With the Project

ORNAMENT Road Traffic Noise Predi S02f

Airport Road Countryside Drive to South of Stonecrest Dr / Braydon Blvd

DLA	Posted Speed Limit (km/hr)	Road Grade (%)	Road Grade Mode	Road Pavement	Angle 1 (degrees)	Angle 2 (degrees)	Topography	Wood Depth	No of Row of Houses	Density of 1st Row	Intermediate Surface	Receptor Height (m)	Source-Receptor Perpendicular Distance	Source-Receptor Total Distance	Elevation Change	Barrier Angle 1 (degrees)	Barrier Angle 2 (degrees)	Barrier Height (m)	Barrier Receiver Distance (m)	Source Elevation (m)	Receiver Gnd Elevation (m)	Barrier Base Elevation (m)	# Vehicles	%Cars	%MT	%HT
OLA01	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	43	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	56	56	0	-90	43	2.2	17	224.82	224.56	226.72	394	92.00%	4.00%	4.00%
OLA02	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	68	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	53	53	0	-90	68	2.2	13	224.40	224.21	226.35	394	92.00%	4.00%	4.00%
OLA03	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	72	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	60	0	-90	72	2.2	20	223.63	223.80	227.03	394	92.00%	4.00%	4.00%
OLA04	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-85	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	21	21	0	-85	90	2.2	6	222.58	223.58	224.28	394	92.00%	4.00%	4.00%
OLA05	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	79	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	55	0	-90	79	2.2	16	222.56	222.74	223.41	394	92.00%	4.00%	4.00%
OLA06	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	81	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	81	2.2	12	221.59	222.06	222.86	394	92.00%	4.00%	4.00%
OLA07	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-87	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	25	25	0	-87	90	2.2	10	220.73	221.75	222.13	394	92.00%	4.00%	4.00%
OLA08	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	83	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	55	55	0	-90	83	2.2	16	220.92	221.65	221.38	394	92.00%	4.00%	4.00%
OLA09	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	84	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	84	2.2	12	219.83	220.13	221.28	394	92.00%	4.00%	4.00%
OLA10	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	20	20	0	-90	90	2.2	5	218.86	220.35	220.44	394	92.00%	4.00%	4.00%
OLA11	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	90	2.2	12	219.09	219.32	220.60	394	92.00%	4.00%	4.00%
OLA12	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	52	52	0	-90	90	2.2	12	218.48	218.45	220.23	394	92.00%	4.00%	4.00%
OLA13	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	51	51	0	-90	90	2.2	12	217.48	218.14	219.32	394	92.00%	4.00%	4.00%
OLA14	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	9	216.48	217.16	218.46	394	92.00%	4.00%	4.00%
OLA15	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	9	215.75	216.49	217.47	394	92.00%	4.00%	4.00%
OLA16	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	22	22	0	-90	90	2.2	6	214.91	216.26	216.76	394	92.00%	4.00%	4.00%
OLA17	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	28	28	0	-90	90	2.2	12	213.61	214.14	214.88	394	92.00%	4.00%	4.00%
OLA18	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	65	65	0	-90	90	2.2	19	214.90	214.77	214.11	394	92.00%	4.00%	4.00%
OLA19	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	9	213.62	214.25	215.65	394	92.00%	4.00%	4.00%
OLA20	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	48	48	0	-90	90	2.2	9	212.58	213.26	213.80	394	92.00%	4.00%	4.00%
OLA21	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	26	26	0	-90	90	2.2	11	212.06	213.15	213.58	394	92.00%	4.00%	4.00%
OLA22	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	67	67	0	-90	90	2.2	8	212.09	212.90	212.21	394	92.00%	4.00%	4.00%
OLA23	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	73	73	0	-90	90	2.2	12	212.24	213.08	210.21	394	92.00%	4.00%	4.00%
OLA24	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	32	32	0	-90	90	2.2	15	212.64	213.63	213.00	394	92.00%	4.00%	4.00%
OLA25	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	24	24	0	-90	90	2.2	7	212.41	213.46	213.17	394	92.00%	4.00%	4.00%
OLA26	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	60	60	0	-90	90	2.2	21	212.63	212.56	212.99	394	92.00%	4.00%	4.00%
OLA27	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	50	50	0	-90	90	2.2	11	212.44	212.60	213.32	394	92.00%	4.00%	4.00%
OLA28	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	35	35	0	-90	90	2.2	18	212.03	213.46	212.67	394	92.00%	4.00%	4.00%
OLA29	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	10	212.19	212.50	213.19	394	92.00%	4.00%	4.00%
OLA30	70	0.0%	2 Manual	1 Typical Asphalt or Concrete	-90	90	2 Flat/gentle slope; with barrier	0 None, or < 30 m woods	0	95%	1 Absorptive Ground	1.50	49	49	0	-90	90	2.2	11	211.92	212.45	212.78	394	92.00%	4.00%	4.00%



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