

Environmental Noise Feasibility Study

Columbia Square

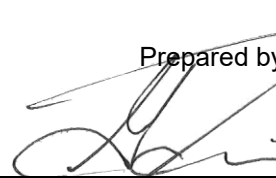

Proposed Mixed-Use Development
14245 Highway 50
Bolton, Town of Caledon

April 23, 2024
Project: 121-0047

Prepared for

Columbia Square Inc

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VALCOUSTICS

Canada Ltd.

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2.0	April 23, 2024	Update to address revisions to architectural drawings

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Environmental Noise Feasibility Study

Columbia Square

Proposed Mixed-Use Development

14245 Highway 50
Bolton, Town of Caledon

EXECUTIVE SUMMARY

Valcoustics Canada Ltd. (VCL) previously prepared an Environmental Noise Feasibility Study dated November 9, 2021 for the proposed mixed-use development. This update report has been prepared to address revisions to the architectural drawings.

The proposed development is located at the northeast corner of Highway 50 and Columbia Way in Bolton and will include 3 phases (Phases 1, 2 and 3):

- Phase 1 includes eleven back-to-back stacked townhouse blocks (Blocks A to K);
- Phase 2 includes a mixed-use building consisting of a 3-storey podium with two 10-storey residential towers (Building A); and
- Phase 3 includes a 9-storey residential building (Building B).

The on-site sound levels have been determined and compared with the applicable Ministry of the Environment, Conservation and Parks (MECP) noise guideline limits to determine the need for noise mitigation.

The significant transportation noise sources in the project vicinity include road traffic along Highway 50 and Columbia Way.

To meet the applicable transportation noise source guideline limits:

- Buildings A and B require mandatory air conditioning for noise control purposes.
- Blocks A, B, E, H and K require the provision for adding air conditioning at a later date.
- Accounting for exterior wall construction meeting STC 37, the following exterior window construction is required:
 - STC 33 at Building A; and
 - STC 28 at Building B and Blocks A, B, E, H and K.

- Final wall and window STC requirements should be reviewed when detailed building plans and architectural drawings are available. This is usually done as a condition for obtaining a building permit.

The stationary noise source with the potential for impact at the subject site is the Town of Caledon Yard #3 located at 14220 Highway 50, on the west side of Highway 50 to the proposed development. The applicable stationary noise source guideline limits are expected to be met at the subject site without mitigation measures.

1.0 INTRODUCTION

VCL previously prepared an Environmental Noise Feasibility Study for the proposed mixed-use development dated November 9, 2021. This update report has been prepared to address revisions to the architectural drawings.

The sound levels and noise mitigation measures required for the proposed development to comply with the applicable MECP noise guideline limits are outlined herein.

1.1 DESCRIPTION OF SITE AND SURROUNDING AREA

The subject site is located at 14245 Highway 50, at the northeast corner of Highway 50 and Columbia Way in Bolton, Town of Caledon. The site is bounded by:

- Highway 50, with the Town of Caledon Yard #3 and agricultural land beyond, to the west;
- Columbia Way, with residential townhouses beyond, to the south;
- St. Michael Catholic Secondary School to the east, and
- Agricultural land, with the Albion Auto Centre and John's Nursery beyond, to the north.

A Key Plan is included as Figure 1.

This study is based on the architectural drawings prepared by KFA Architects and Planners Inc., dated February 21, 2024. The architectural drawings are included as Appendix A. The Site Plan Phases 1, 2 and 3 from the drawing set is included as Figure 2. Building numbers have been added by VCL for descriptive purposes.

1.2 THE PROPOSED DEVELOPMENT

The proposed development will include 3 phases (Phase 1, 2 and 3):

- Phase 1 is located within the north half of the site and include eleven (11) back-to-back stacked townhouse blocks (Blocks A, B, C, D, E, F, G, H, I, J and K).
- Phase 2 is located at the southwest corner of the site and includes a mixed-use building (Building A) consisting of a 3-storey podium with two 10-storey residential towers above (Towers A1 and A2). The ground floor of the podium will include retail uses. A common grade level outdoor amenity area will be provided at the south side of the building.

- Phase 3 is located at the southeast corner of the site and includes a 9-storey residential building (Building B). A common grade level outdoor amenity area will be provided at the south side of the building.

The project will include one level of underground parking extending below the entire development. A second level of underground parking will also be provided below Phase 2. A park will be located at the centre of the site. Most units within the development will include small (less than 4 m in depth) private balconies/terraces.

2.0 NOISE SOURCES

2.1 TRANSPORTATION NOISE SOURCES

The transportation noise sources with potential to impact the proposed development include road traffic on Highway 50, Columbia Way and the future Kingsview Drive extension along the east side of the site. Traffic volumes or noise from other roadways are anticipated to be minor and no significant impacts are expected at the subject site. Thus, these roadways have not been considered further in the assessment.

Road traffic data used in the assessment is summarized in Table 1 and provided in Appendix B.

2.1.1 Road Traffic Sources

Ultimate road traffic data for Highway 50 was obtained from the Region of Peel. The posted speed limit of Highway 50 in the vicinity of the site is 60 km/hr. In accordance with Town of Caledon requirements, a vehicle travel speed of 70 km/hr was used in the assessment.

Future road traffic volumes (applicable to the year 2035) for Kingsview Drive and Columbia Way were provided by CGH Transportation Inc., the traffic consultant on the project. The data included peak AM and PM hourly volumes at the intersection of Columbia Way and Kingsview Drive. A 24-hour volume was obtained by multiplying the higher of the PM/AM volume by 10. A growth rate of 2%, compounded annually, was used to obtain future year (2044) traffic volumes. A 20-year design condition was used as is required by the Town of Caledon (See Section 3.1.3). The percentages of medium trucks and heavy trucks were assumed to be 3% and 2% of the total traffic volumes, respectively. A day/night split of 90%/10% was used for each roadway, as is typical for well-travelled roadways. The posted speed limit of Columbia Way in the vicinity of the site is 40 km/hr. In accordance with Town of Caledon requirements, a vehicle travel speed of 50 km/hr was used in the assessment. The same speed was applied to Kingsview Drive.

2.2 STATIONARY NOISE SOURCES

2.2.1 Existing Sources

The Town of Caledon Yard #3 is located at 14220 Highway 50, on the west side of Highway 50 to the proposed development. There are two departments from the Town of Caledon that operate at this property. To the north is the operations centre for the park's maintenance services, and to the south is a road maintenance facility. VCL staff visited the yard to complete sound measurements and observations on June 25, 2021. A detailed assessment of the noise impact from the facility onto the subject site is included in Section 4.2.

Albion Auto Centre is located at 14289 Highway 50, approximately 65 m north of the proposed development. Noise sources at facility are expected to be noise emitted through open overhead bay doors, which face west towards Highway 50, away from the subject site. Based on the distance setback, orientation of the overhead doors and presence of Highway 50 (which contributes to a higher ambient sound level in the area), significant noise impact from this facility is not expected. This was confirmed during a site visit by VCL staff on June 25, 2021, where noise from the facility was not audible at the subject site.

John's Nursery Garden is located at 14337 Highway 50, approximately 180 m north of the proposed development. Noise sources at facility are expected to be the occasional truck delivery. Based on the distance setback and presence of Highway 50, significant noise impact from this facility is not expected. This was confirmed during a site visit by VCL staff, where noise from the facility was not audible at the subject site.

St. Michael Catholic Secondary School is located at 9130 Columbia Way, directly east of the proposed development. The parking lot and field are located on the west side of the property, nearest to the subject site. The school building is located approximately 170 m east of the proposed development. Noise sources at the school are expected to be the rooftop HVAC equipment. Due to the setback distance, significant noise impact from the facility is not expected. This was confirmed during a site visit to the area by VCL staff, where noise from the facility was not audible at the subject site.

James Dick Construction is located at 14442 Highway 50, greater than 430 m northwest of the proposed development. Noise sources at the facility are expected to include truck traffic to and from the yard, front end loaders loading aggregate material into dump trucks, crushing of raw aggregate materials, etc. Due to the setback distance and presence of the intervening Highway 50 (which contributes to a higher ambient sound level in the area), significant noise impact from this facility is not expected. This was confirmed during a site visit to the area by VCL staff, where noise from the facility was not audible at the subject site.

Motor Home RV Travel is located at 14124 Highway 50, approximately 140 m southwest of the proposed development. The only noise source associated with the facility is expected to be vehicle movements around the site. Due to the setback distance and presence of the intervening Highway 50, significant noise impact from this facility is not expected. This was confirmed during a site visit to the area by VCL staff, where noise from the facility was not audible at the subject site.

The Caledon Centre of Recreation and Wellness is located at 14111 Highway 50, with the nearest building approximately 160 m south of the subject site. The only noise sources associated with the facility are expected to be the rooftop HVAC equipment. Based on the setback distance, significant noise impact from this facility is not expected. This was confirmed during a site visit to the area by VCL staff, where noise from the facility was not audible at the subject site.

There are no other stationary noise sources in the vicinity of the site that are expected to create a significant noise impact at the subject site.

2.2.2 Future Sources

The future stationary noise sources with potential to impact the residential dwellings in the proposed development is the rooftop mechanical equipment associated with Buildings A and B,

the ventilation systems for the underground parking levels and emergency generator systems (if applicable). Detailed plans for the buildings are not yet available. However, the buildings will need to be designed such that the noise emissions meet the stationary noise source limits in MECP Publication NPC-300, recognizing the adjacent residential uses. This is normally addressed during the detailed design of the building once floor plans and mechanical systems have been developed and mechanical equipment selections have been made.

3.0 ENVIRONMENTAL NOISE GUIDELINES

3.1 TRANSPORTATION NOISE SOURCES

3.1.1 MECP Publication NPC-300

The applicable noise guidelines for new residential development are those in MECP Publication NPC-300, “Environmental Noise Guideline, Stationary and Transportation Sources - Approval and Planning”.

The environmental noise guidelines of the MECP, as provided in Publication NPC-300, are discussed briefly below and summarized in Appendix C.

3.1.1.1 Architectural Elements

In the daytime, the indoor criterion for road traffic noise is $L_{eq\ Day}^{(1)}$ of 45 dBA for sensitive spaces such as living/dining rooms, dens and bedrooms. At night, the indoor criterion for road traffic noise is $L_{eq\ Night}^{(2)}$ of 45 dBA for sensitive spaces such as living/dining rooms and dens and 40 dBA for bedrooms.

The architectural design of the building envelope (walls, windows, etc.) must provide adequate sound isolation to achieve these indoor sound level limits, based on the applicable outdoor sound levels predicted on the building facades.

3.1.1.2 Ventilation

In accordance with the MECP noise guideline for road traffic sources, if the daytime sound level, $L_{eq\ Day}$, at the exterior face of a noise sensitive window is greater than 65 dBA, means must be provided so that windows can be kept closed for noise control purposes and central air conditioning is required. For daytime sound levels between 56 dBA and 65 dBA inclusive, there need only be the provision for adding air conditioning at a later date. A warning clause advising the occupant of the potential interference with some activities is also required. At nighttime, air conditioning would be required when the sound level exceeds 60 dBA ($L_{eq\ Night}$) at a noise sensitive window (provision for adding air conditioning is required when greater than 50 dBA).

3.1.1.3 Outdoors

For outdoor amenity areas (“Outdoor Living Areas” - OLA’s), the guideline sound level is 55 dBA $L_{eq\ Day}$ (0700 to 2300 hours), with an excess not exceeding 5 dBA considered acceptable if it is technically not practicable to achieve the 55 dBA objective, provided warning clauses are

(1) 16-hour energy equivalent sound level (0700-2300 hours).

(2) 8-hour energy equivalent sound level (2300-0700 hours).

registered on title. Note that for road and rail traffic sources, a balcony is not considered an OLA unless it is:

- the only OLA for the occupant;
- at least 4 m in depth; and
- unenclosed.

3.1.2 Region of Peel

The Region of Peel guidelines are essentially the same as the MECP guidelines except that the nighttime level for triggering the air conditioning requirement is 1 dBA more stringent (i.e., lower) than the levels specified by the MECP – i.e., mandatory air conditioning for nighttime sound levels of 60 dBA or greater, and the provision for adding air conditioning for levels between 51 to 59 dBA inclusive.

A maximum desirable sound barrier height of 4 m (relative to roadway centreline elevation) is indicated with a maximum acoustic fence component height of 2.4 m, although a height of no more than 2.0 m is preferred.

3.1.3 Town of Caledon

For transportation noise sources, the Town of Caledon's general policy is not to accept the 5 dBA excess above the 55 dBA MECP objective for OLA's. However, an excess may be acceptable if unreasonably high sound barriers are needed to meet the 55 dBA objective.

The Town's maximum acoustic fence height is 2.4 m. Higher barriers can be achieved using a combination of an acoustic fence and a berm.

Also, traffic noise impacts are to be assessed based on a 20-year traffic forecast for the adjacent roadways, using a traffic speed 10 km/hr above the posted speed limit.

3.2 STATIONARY NOISE SOURCES

3.2.1 MECP Noise Guideline Publication NPC-300

Stationary sources are treated differently by the MECP guideline than transportation sources of noise. Stationary source noise criteria used for noise impact assessment are dependent on the type of area and the ambient sound environment.

The site and area are considered Class 1; i.e., an area where the ambient sound environment is dominated by "urban hum", primarily traffic noise. This is due to the proximity to the area road network, including Highway 50 and Columbia Way in particular.

MECP Publication NPC-300 states that the guideline limits for stationary sources shall be defined by the higher of the ambient sound level, due to road traffic noise, or the minimum exclusion limits for a Class 1 area of 50 dBA daytime (0700 to 1900 hours), 50 dBA evening (1900 to 2300 hours) and 45 dBA nighttime (2300 to 0700 hours). The limits apply at a noise sensitive plane of window (POW) at all times or at an outdoor point of reception (OPOR) in the daytime and evening only. There are no sound level limits for OPORs at night.

The MECP requires a “worst-case” one-hour operating scenario be analysed. This would typically occur when the background ambient sound level is at a minimum and the noise generated from the stationary noise sources is at a maximum.

The guideline limits apply to habitable spaces such as living/dining/family rooms and sleep areas. No indoor sound level guidelines are provided for stationary sources. There are also no requirements for stationary source noise impacts onto commercial/retail units.

4.0 NOISE IMPACT ASSESSMENT

4.1 TRANSPORTATION NOISE SOURCES

4.1.1 Assessment Method

Using the road traffic data in Tables 1, outdoor sound levels, in terms of equivalent sound pressure levels during the daytime and nighttime periods ($L_{eq \text{ Day}}$ and $L_{eq \text{ Night}}$), were determined using STAMSON V5.04 – ORNAMENT, the computerized road noise prediction model of the MECP.

The daytime and nighttime sound levels at the building facades were calculated at heights of 31.5 m above grade for Building A, 29.0 m above grade for Building B and 9.5 m above grade for the townhouse blocks. The building heights represent the top storey worst-case locations. For the common OLAs at the south sides of Buildings A and B, the receptors were taken at the centre of the amenity space at a height of 1.5 m above the ground. All other balconies/terraces in the development are less than 4 m in depth and not considered OLAs.

Inherent screening of each building face due to its orientation to the noise source was taken into account. Screening from other buildings within the development was not included in the assessment.

4.1.2 Predicted Sound Levels

The highest unmitigated daytime/nighttime facade sound levels are:

- 67 dBA/60 dBA are predicted to occur on the west facade of Building A, siding onto Highway 50.
- 62 dBA/54 dBA are predicted to occur on the west facade of Block A, siding onto Highway 50.
- 61 dBA is predicted at the common grade level outdoor amenity areas at the south sides of Buildings A and B.

Table 2 summarizes the unmitigated daytime and nighttime sound level predictions for several locations within in the proposed development. Sample calculations are included in Appendix D.

4.1.3 Noise Control Requirements

The noise control requirements can generally be classified into two categories which are interrelated, but which can be treated separately for the most part:

- a) Architectural elements to achieve acceptable indoor noise guidelines;
- b) Design features to protect the OLA's.

Noise abatement requirements are summarized on Figure 2 and in Table 3 along with the notes to Table 3.

4.1.3.1 Indoors

4.1.3.1.1 *Architectural Elements*

The indoor sound level guidelines for the transportation sources can be achieved by using appropriate construction for exterior walls, windows and doors. In determining the worst-case architectural requirements, the following wall and window areas (respectively, of the associated floor areas) were assumed, at a corner room with both facades directly exposed to and at an angle to the noise sources, for both living/dining rooms and bedrooms:

- 20% (wall) and 80% (window) for Buildings A and B; and
- 80% (wall) and 30% (window) for the townhouse blocks.

Accounting for exterior wall construction meeting STC 37, the following window construction is required:

- STC 33 for all residential units in Building A; and
- STC 28 for all residential units in Building B and Blocks A, B, E, H and K

For all remaining residential dwellings in this development, exterior walls and windows meeting the minimum non-acoustical requirements of the Ontario Building Code (OBC) will be sufficient to achieve the indoor noise guideline criteria of the MECP.

For walls, a typical exterior facade construction which meets the minimum non-acoustical requirements of the OBC would be expected to achieve STC 37. For windows, double-glazing configurations meeting the minimum non-acoustical requirements of the OBC would be expected to achieve STC rating of 28.

Note, the window frames must also be designed to ensure that the overall sound isolation performance for the entire window meets the sound isolation requirement. This should be confirmed by the window manufacturer through the submission of acoustical test data.

The final sound isolation requirements should be reviewed when architectural plans are finalized. Wall and window constructions should also be reviewed at this point to ensure that the required sound isolation performance is met.

4.1.3.1.2 *Ventilation Requirements*

Based on the predicted sound levels, Building A requires mandatory air conditioning for noise control purposes.

Building B and Blocks A, B, E, H and K require the provision for adding air conditioning at a later date. This typically takes the form of a ducted, forced air heating system, suitably sized to accommodate air conditioning.

Provision for adding air conditioning is typically not practical to implement in mid-rise construction. As such, the ventilation requirements for Building B have been upgraded to mandatory air conditioning.

4.1.3.2 Outdoors

The predicted daytime sound level at the common grade level outdoor amenity areas at the south side of Buildings A and B are 61 dBA. To meet the 55 dBA objective, a 2.0 m high sound barrier is required around the amenity areas. See Figure 2. Note, if these spaces are used as commercial/restaurant patios, sound barriers would not be required.

All other balconies/terraces in the development are less than 4 m in depth and therefore would not be considered OLAs under the MECP definitions. Similarly, the park at the centre of the site is not considered an OLA as it is not intended for the quiet enjoyment of the outdoors.

The sound barriers/acoustic fences must be of solid construction with no gaps, cracks or holes (except for small openings required for water drainage) and must have a minimum surface weight of 20 kg/m². A variety of materials are available, including concrete, masonry, glass, wood, specialty composite materials, or a combination of the above.

4.1.3.3 Warning Clauses

Warning clauses are a tool to inform prospective owners/occupants of potential annoyance due to existing noise sources. Where the guideline sound level limits are exceeded, appropriate warning clauses should be registered on title or included in the development agreement that is registered on title. The warning clauses should also be included in agreements of Offers of Purchase and Sale and lease/rental agreements to make future occupants aware of the potential noise situation.

Table 3 and notes to Table 3 summarize the warning clauses for the site.

4.2 STATIONARY NOISE SOURCE ASSESSMENT

4.2.1 Noise Sources and Operating Scenarios

The Town of Caledon Yard #3 is located at 14220 Highway 50, on the west side of Highway 50 to the subject site. VCL staff visited the site on June 25, 2021 to complete sound measurements and observations at the facility.

There are two departments from the Town of Caledon that operate at this property. To the north is the operations centre for the park's maintenance services, and to the south is a road maintenance facility. Both facilities operate during the daytime only, between 0700 and 1700 hours.

Figure 3 shows the location of the noise sources considered in the assessment. Sound source data is included in Appendix E.

4.2.1.1 Park Facility

The park facility includes a garage/office building with 4 overhead doors facing east towards Highway 50. During the summer months the garage is used to store lawnmowers and other

landscaping/maintenance equipment. At the northeast corner of the property there is a shed housing a single snow plow used for sidewalk clearing. The snow plow is swapped with the summer maintenance equipment in the garage during the winter months. The rear of the property is used for general storage and parking flatbed trailers used for transporting lawnmowers.

The busiest hour at the park facility is between 0700 and 0800 hour, when a fleet of up to 10 landscape trucks are loaded with lawnmowers before departing for the day. Each truck can carry up to 2 lawnmowers. In the afternoon, the trucks have staggered returns between 1400 and 1700 hours.

Sound data for the lawn mowers driving onto/off of the flatbed trucks was based on a VCL measurements at the facility (Source ID: LwnMwr_Mvt01). A 5 dBA tonal penalty was added to the sound level in accordance with MECP practices.

Sound data for the medium truck movements and trucks idling were based on VCL measurements completed at similar facilities (Source ID: MdTrk_Mvt01 and MdTrk_Idle01).

During the winter months, the only noise associated with the facility is the loading/unloading of a single small snow plow onto a flatbed truck. The winter maintenance operations at the yard include non-emergency daytime services only, as the primary snow removal operations for the Town occur at a different facility. The noise associated with the winter months is expected to be less than the summer months, as there is only a single snow plow stored at the facility and the hours of operation are also daytime only. As such, the noise associated with the winter maintenance activities has not been considered further in the assessment.

4.2.1.2 Road Maintenance Facility

The road maintenance facility contains bulk aggregate material used for road repair/construction work within the Town of Caledon. It is understood the yard is not the primary maintenance yard for the Town and is only used for non-emergency daytime construction activities. The noise sources at the facility are a front-end loader (FEL) loading aggregate material into dump trucks. During the busiest hour, the yard can expect to receive 6 dump trucks at the facility while an FEL operates continuously to load aggregate material into the trucks.

Sound data for the dump truck movements/idling and the FEL working were based on VCL measurements completed at similar facilities (Source ID: DmpTrk_Mvt01/DmpTrk_Idle01 and FEL01).

4.2.2 Noise Sensitive Receptors

Five (5) noise sensitive receptor locations were used to assess the noise impact on the subject site. The receptors are described as:

- POW01 – representing a 10th floor window on the west facade of the Tower A1;
- POW02 – representing an 10th floor window on the west facade of Tower A2, towards the south end of the building;
- POW03 – representing an 8th floor window on the west facade of Tower A2, towards the north end of the building;

- POW04 - representing an 3rd floor window on the west facade of the most westerly unit in Block A; and
- OPOR01 – representing common outdoor amenity area of Building A.

Receptors representing the planes of windows (POW) for the 3rd, 8th and 10th storey windows were assessed at heights of 9.5 m, 24.5 m and 31.5 m above grade, respectively. The outdoor point of reception (OPOR) was assessed at a standing height of 1.5 m above grade.

The POW receptors represent the worst-case locations as determined using the building evaluation feature in CadnaA, where the highest sound level at any storey, at multiple points on the facade is assessed.

The locations of the assessment receptors are shown on Figure 3.

4.2.2.1 Applicable Sound Level Limits

The guideline limits for most receptors are defined by the ambient road traffic noise, due to the proximity of Highway 50.

Existing traffic volumes were used to calculate the applicable guideline limits. Volume counts for 15-minute segments over a 3-day period, applicable to the year 2019 for Highway 50, was provided by the Region of Peel. The truck breakdown was included in the data.

Using the minimum hourly volumes from the above data, the minimum hourly sound levels due to road traffic was predicted at the receptor locations using the CadnaA implementation of the RLS-90 road traffic noise model.

The traffic data is included in Appendix B. Table 4 shows the applicable guideline limits at each receptor.

4.2.3 Analysis Method

A 3-D acoustic model of the proposed development and surrounding area was developed using CadnaA V2023 MR1 environmental noise modeling software, which follows the protocol of ISO Standard 9613-2, “Acoustics – Attenuation of Sound During Propagation Outdoors”, to predict sound levels at each of the receptor locations. Accounting for distance, atmospheric absorption and ground attenuation, the sound level from all the relevant noise sources (hourly L_{eq}) was determined at the worst-case plane of window and outdoor points of reception associated with the proposed development.

Hard ground ($G = 0$) was used for the paved areas and soft ground ($G = 1$) was used elsewhere. Two orders of sound reflection from the building facades were included in the model.

4.2.4 Assessment Results

Table 4 and Figure 3 show the predicted sound levels at the assessment receptors, together with the applicable guideline limits.

The assessment indicates that the sound levels at the subject site are predicted to meet the noise guideline limits. Therefore, mitigation measures for the Town of Caledon Yard #3 are not required.

5.0 CONCLUSION

With appropriate acoustical design of the development, a suitable acoustical environment can be provided and the applicable MECP noise guideline requirements met.

6.0 REFERENCES

1. PC STAMSON 5.04, “Computer Program for Road Traffic Noise Assessment”, Ontario Ministry of the Environment and Climate Change.
2. Building Practice Note No. 56: “Controlling Sound Transmission into Buildings”, by J. D. Quirt, Division of Building Research, National Council of Canada, September 1985.
3. “Environmental Noise Assessment in Land-Use Planning 1987”, Ontario Ministry of the Environment, February 1987, ISBN 0-7729-2804-5.
4. “Road and Rail Noise: Effects on Housing”, Canada Mortgage and Housing Corporation, Publication NHA 5156, 81/10.
5. “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, October 2013.
6. “General Guidelines for the Preparation of Acoustical Reports in the Region of Peel”, Region of Peel, November 2012.
7. “Development Standards Manual Version 5.0”, Town of Caledon, 2019.
8. “Environmental Noise Feasibility Study, Columbia Square, Caledon” prepared by Valcoustics Canada Ltd., dated November 9, 2021.”

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TABLE 1 ROAD TRAFFIC DATA

Roadway	Year	AADT ⁽⁴⁾	% Trucks		Day/Night Split (%)	Speed (kph)
			Medium	Heavy		
Highway 50 ⁽¹⁾	Ultimate	16 200	1.85 (Day) 1.75 (Night)	0.68 (Day) 0.31 (Night)	90 / 10	60
Columbia Way ^{(2),(3)}	2035 (2044)	5 760 (10 182)	3	2	90 / 10	40
Kingsview Drive ^{(2),(3)}	2035 (2044)	2600 (3107)	3	2	90 / 10	40

Notes:

- (1) Ultimate traffic data was obtained from the Region of Peel and confirmed in 2023 to still be valid. The posted speed limit of Highway 50 in the project vicinity is 60 km/hr. A travel speed of 70 km/hr was used in the assessment, in accordance with requirements from the Town of Caledon.
- (2) Future traffic data for 2035 was obtained from the traffic engineers on the project. Year 2044 volumes were calculated by projecting the 2035 counts at a rate of 2% compounded annually. The posted speed limit is 40 km/hr. A travel speed of 50 km/hr was used in the assessment, in accordance with requirements from the Town of Caledon.
- (3) Assumed truck percentages of 3% medium trucks and 2% heavy trucks were used in the assessment.
- (4) Annual Average Daily Traffic.

TABLE 2 PREDICTED UNMITIGATED OUTDOOR SOUND LEVELS

Location ⁽¹⁾	Source	Distance (m) ⁽²⁾	L _{eq} Day (dBA)	L _{eq} Night (dBA)
Building A - Southwest Corner West Facade	Hwy 50	25	66	58
	Columbia Way	23	61	54
	TOTAL	—	67	60
Building B - Southeast Corner South Facade	Hwy 50	209	53	46
	Columbia Way	17	62	56
	Kingsview Dr	27	53	47
	TOTAL	—	63	56
Block A - West Facade	Hwy 50	29	62	55
	Columbia Way	147	37	31
	TOTAL	—	62	55
Block C - South Facade	Hwy 50	91	52	45
	Columbia Way	145	47	41
	TOTAL	—	53	46
Block I - West Facade	Hwy 50	137	53	46
	Columbia Way	62	50	43
	TOTAL	—	55	47
Block K - East Facade	Kingsview Dr	22	55	49
	Columbia Way	53	52	45
	TOTAL	—	57	50
Building A - OLA	Hwy 50	113	45	—
	Columbia Way	18	61	—
	TOTAL	—	61	—
Building B - OLA	Hwy 50	147	44	—
	Columbia Way	18	61	—
	TOTAL	—	61	—

Notes:

- (1) See Figure 2.
- (2) Distance indicated is taken from the centreline of the noise source to the point of reception.
- (3) Sound levels during nighttime hours are not applicable for outdoor living areas.

TABLE 3 NOISE ABATEMENT MEASURES

Location	Air Conditioning ⁽¹⁾	Exterior Wall ⁽²⁾	Exterior Window ⁽³⁾	Sound Barrier ⁽⁴⁾	Warning Clauses ⁽⁵⁾
Building A	Mandatory	STC 37	STC 33	2.0 m high sound barrier at grade level amenity area	A + B + D
Building B	Mandatory	STC 37	STC 28	2.0 m high sound barrier at grade level amenity area	A + B + D
Block A	Provision for Installation	STC 37	STC 28	-	A + C + D
Blocks B, E, H and K	Provision for Installation	STC 37	STC 28	-	A + C
All remaining Blocks	No special acoustic requirements				

Notes:

- (1) Central air conditioning allows windows to remain closed for noise control purposes. Provision for adding air conditioning typically takes the form of a ducted ventilation system suitably sized to permit the addition of central air conditioning by the occupant.
- (2) STC - Sound Transmission Class Rating (Reference ASTM-E413).
STC values are based upon assumed percentages of wall and window area to associated floor area and should be reviewed once building plans are finalized.
- (3) STC - Sound Transmission Class Rating (Reference ASTM-E413). A sliding glass walkout door should be considered as a window and be included in the percentage of glazing.
STC values are based upon assumed percentages of wall and window area to associated floor area and should be reviewed once building plans are finalized.
- (4) Sound barriers must be of solid construction having a minimum face density of 20 kg/m² with no gaps, cracks or holes.
- (5) Warning clauses to be registered on title and be included in Offers of Purchase and Sale for designated lots:
 - A. "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road may occasionally interfere with some activities of the dwelling occupants as the sound level may exceed the noise criteria of the Ministry of the Environment, Conservation and Parks and/or the municipality."
 - B. "This dwelling unit has been supplied with an air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the noise criteria of the Ministry of the Environment, Conservation and Park and/or the municipality."
 - C. "This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Ministry of the Environment, Conservation and Parks and/or the municipality."
 - D. "Purchasers/tenants are advised that due to the proximity of the Town of Caledon Yard #3, noise from this facility may at times be audible."
- (6) All exterior doors shall be fully weather-stripped.

**TABLE 4 UNMITIGATED PREDICTED SOUND LEVELS DUE TO
TOWN OF CALEDON YARD #3**

Receptor ID⁽¹⁾	Predicted Hourly Sound Level (dBA)⁽³⁾	Guideline Limit (dBA)⁽²⁾⁽³⁾
POW01	52	58
POW02	54	61
POW03	52	62
POW04	51	60
OPOR01	48	50

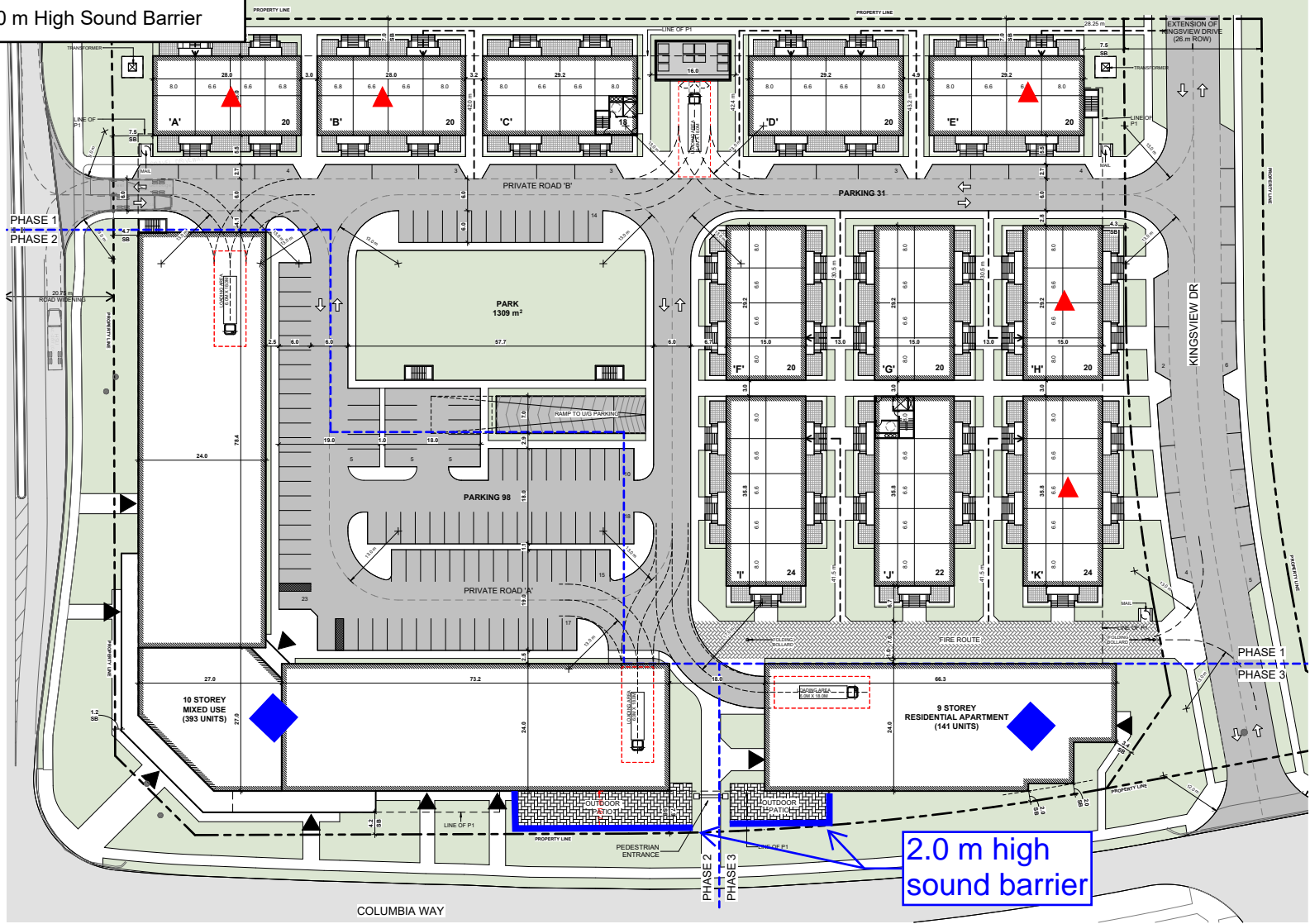
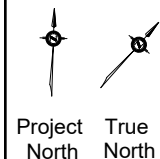
Notes:

- (1) See Figure 3 for receptor locations.
- (2) Defined by the higher of the ambient road traffic noise or minimum exclusion limits in a Class 1 area.
- (3) Daytime only (0700 to 1900 hours).



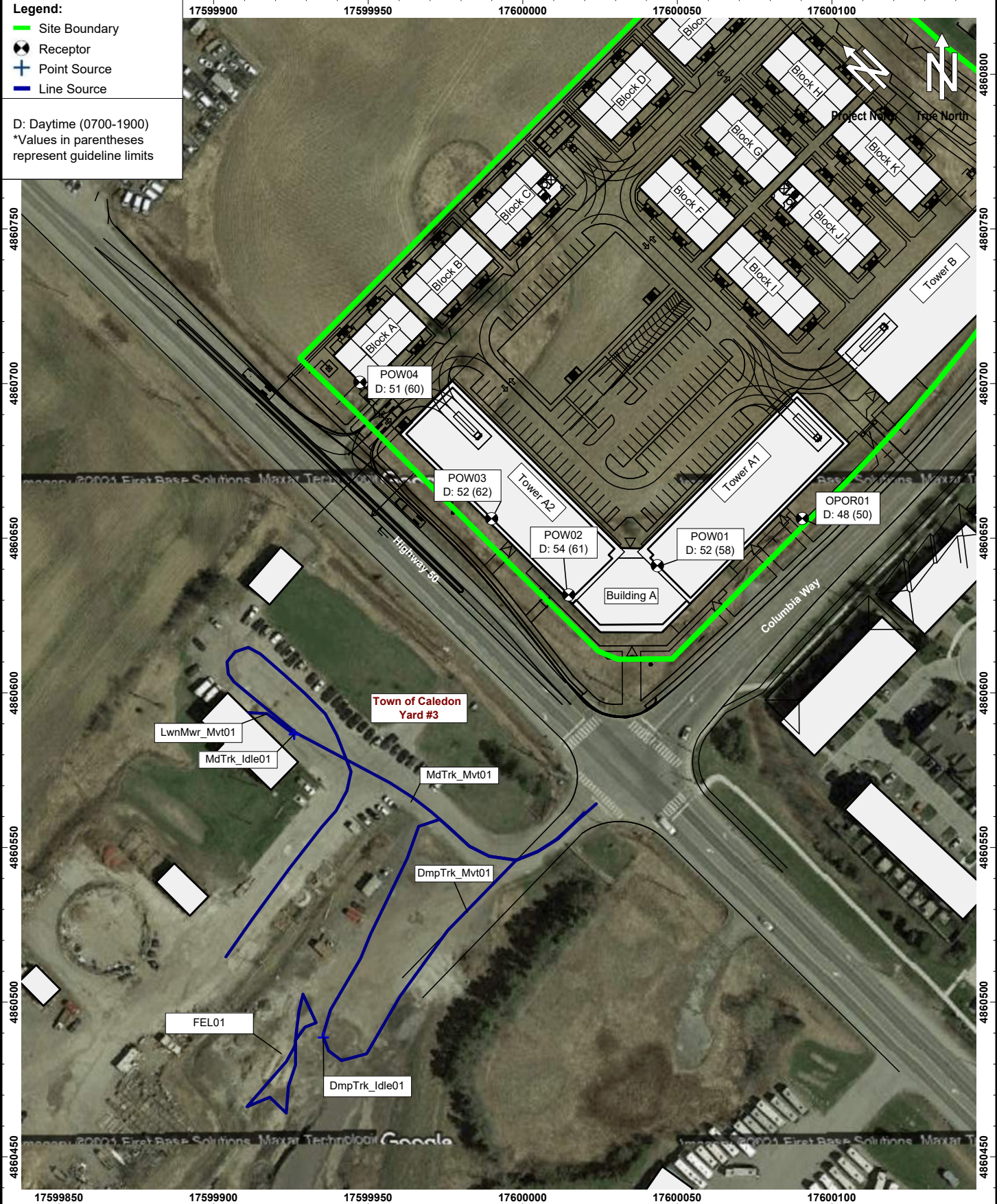
Legend


- ◆ Mandatory AC
- ▲ Provision for Adding AC
- 2.0 m High Sound Barrier



Base drawing prepared by KFA Architects and Planners Inc.

	<p>Title</p> <p>Site Plan Phases 1, 2 and 3</p>	<p>Date</p> <p>Mar 13, 2024</p>	<p>Figure</p> <p style="font-size: 2em;">2</p>
	<p>Project Name</p> <p>Columbia Square, Caledon</p>	<p>Project No.</p> <p>121-0047</p>	



	Title Predicted Sound Levels (dBA) - Town of Caledon Yard #3	Date 2024-03-13	Figure 3
	Project Name Columbia Square, Caledon	Project No. 121-0047.000	

APPENDIX A

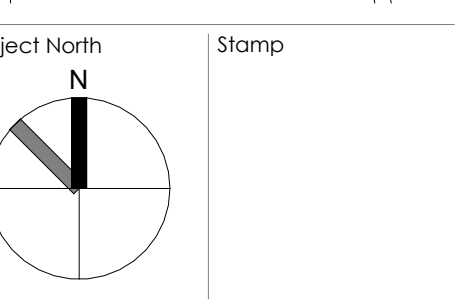
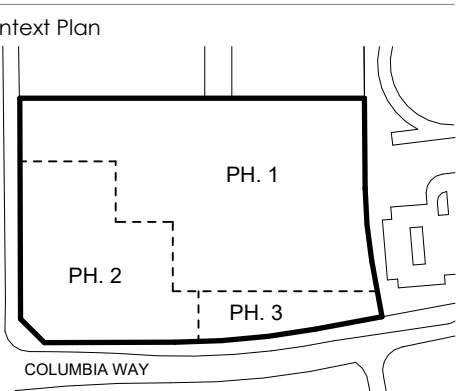
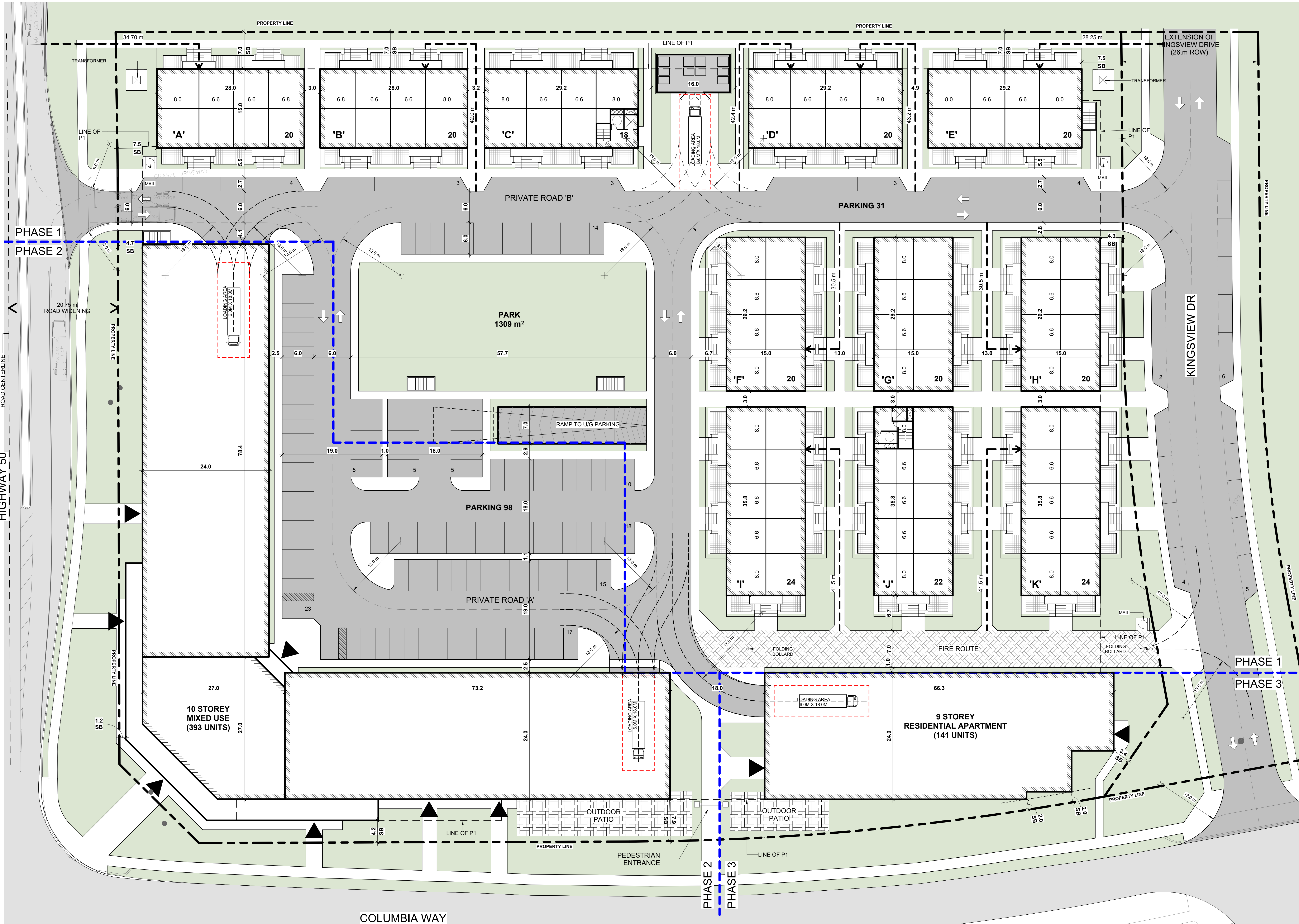
ARCHITECTURAL DRAWINGS

COLUMBIA SQUARE

BOLTON, ONTARIO

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SITE PLAN PHASES
 1, 2, 3

No.
A100

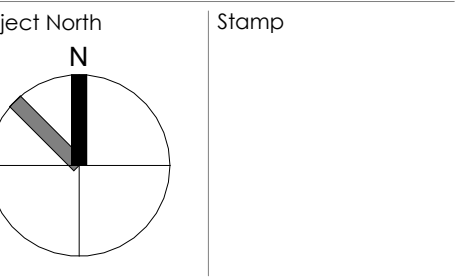
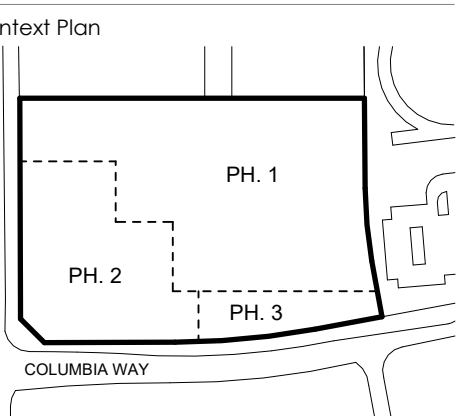
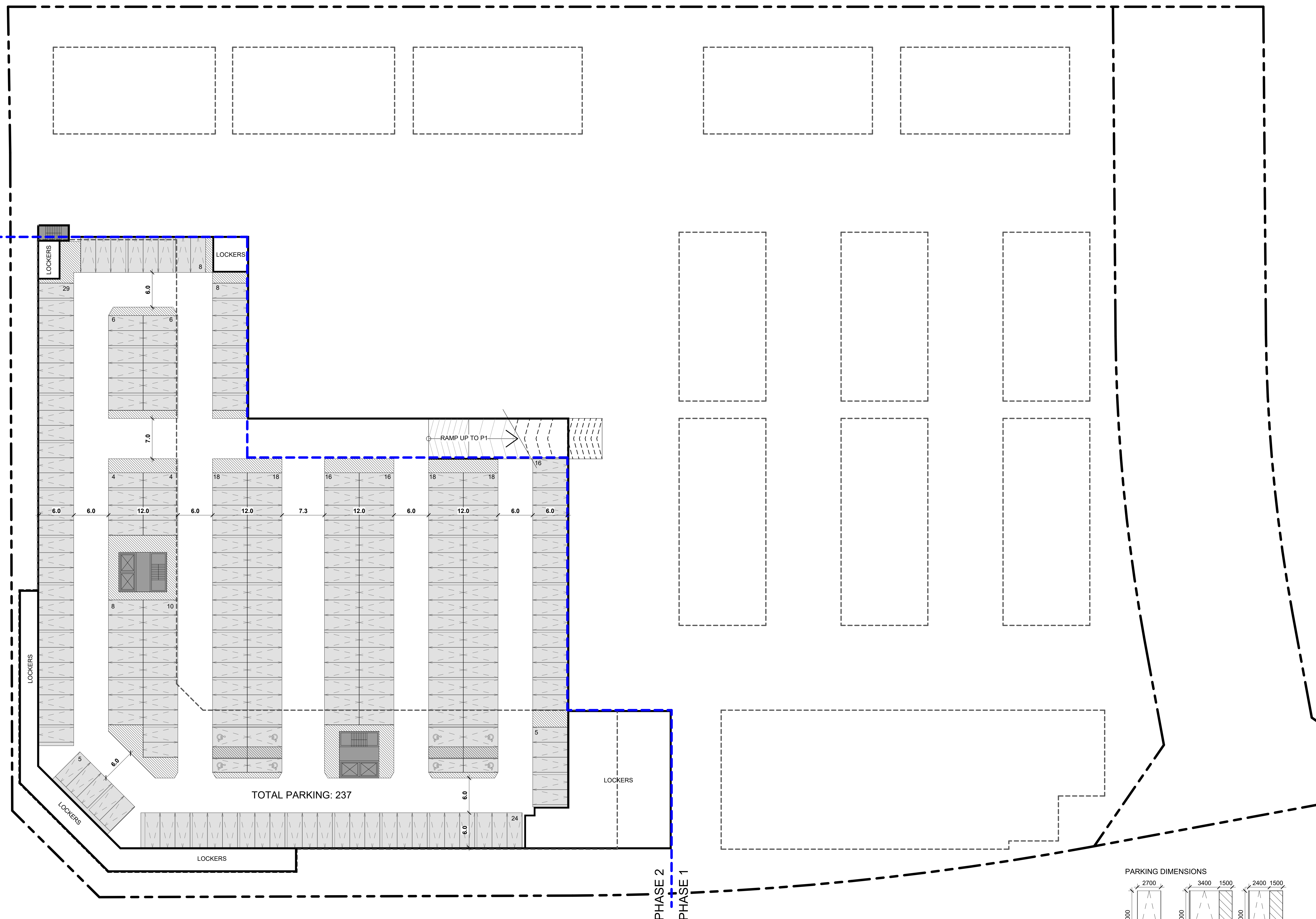
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PHASE 1
PHASE 2



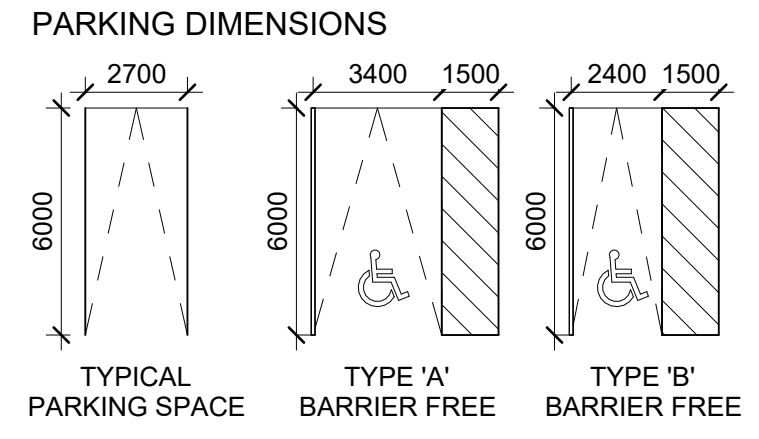
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P2 LEVEL PLAN
PHASES 1, 2, 3

No.
A101

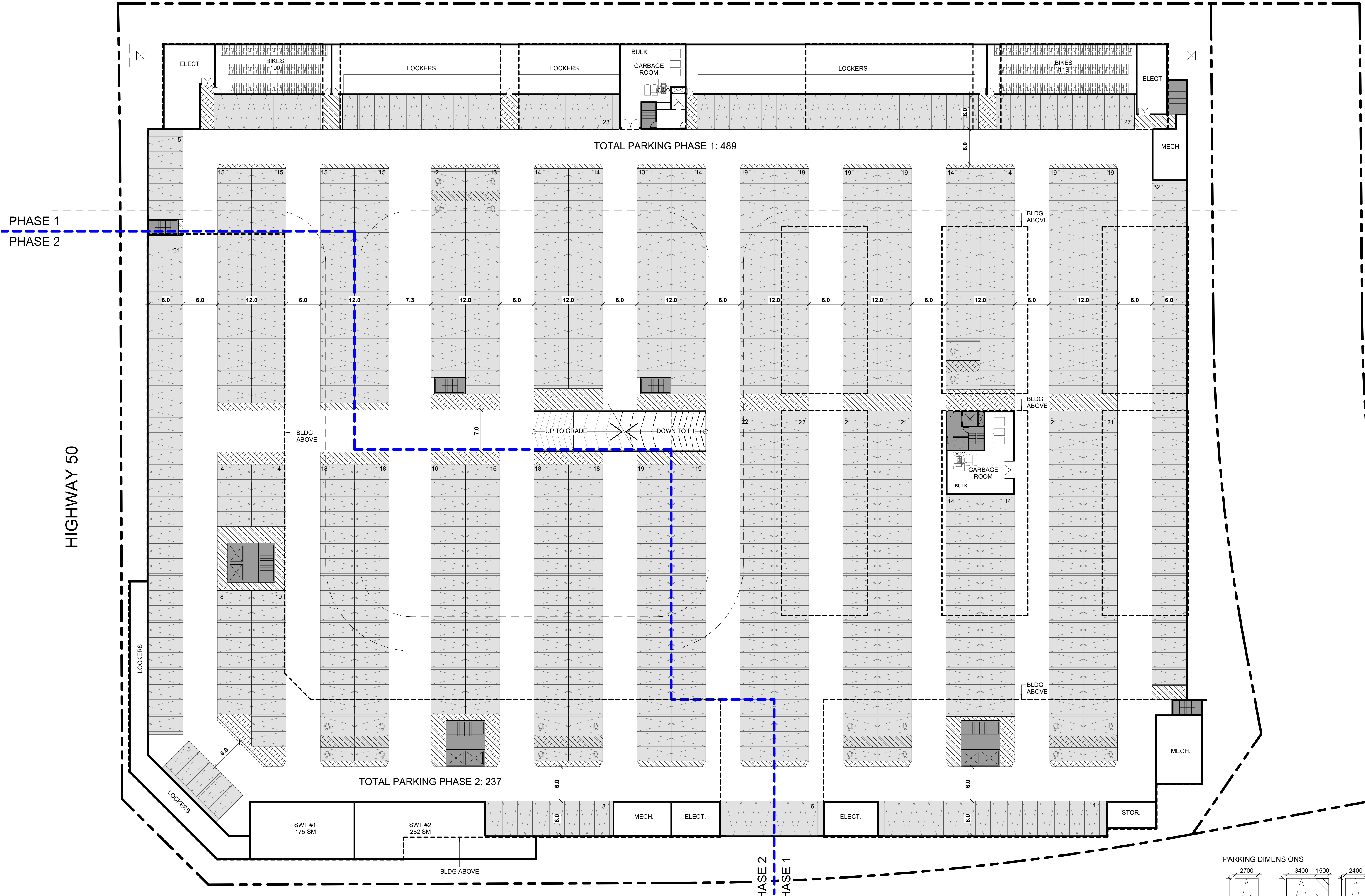


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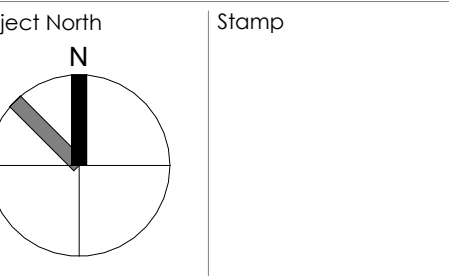
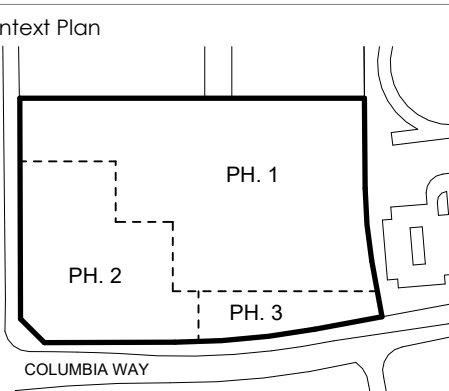
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PHASE 1
PHASE 2

HIGHWAY 50

COLUMBIA WAY



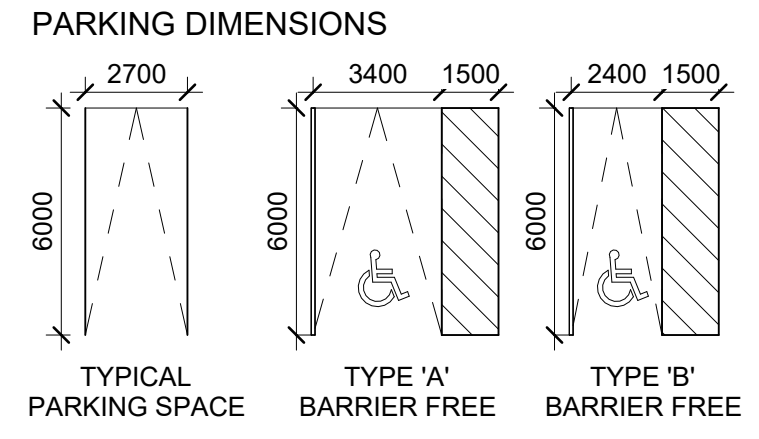
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P1 LEVEL PLAN
PHASES 1, 2, 3

No.
A102

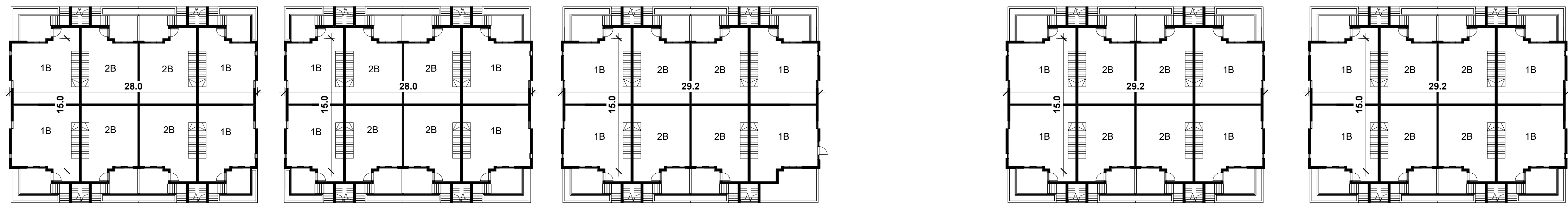


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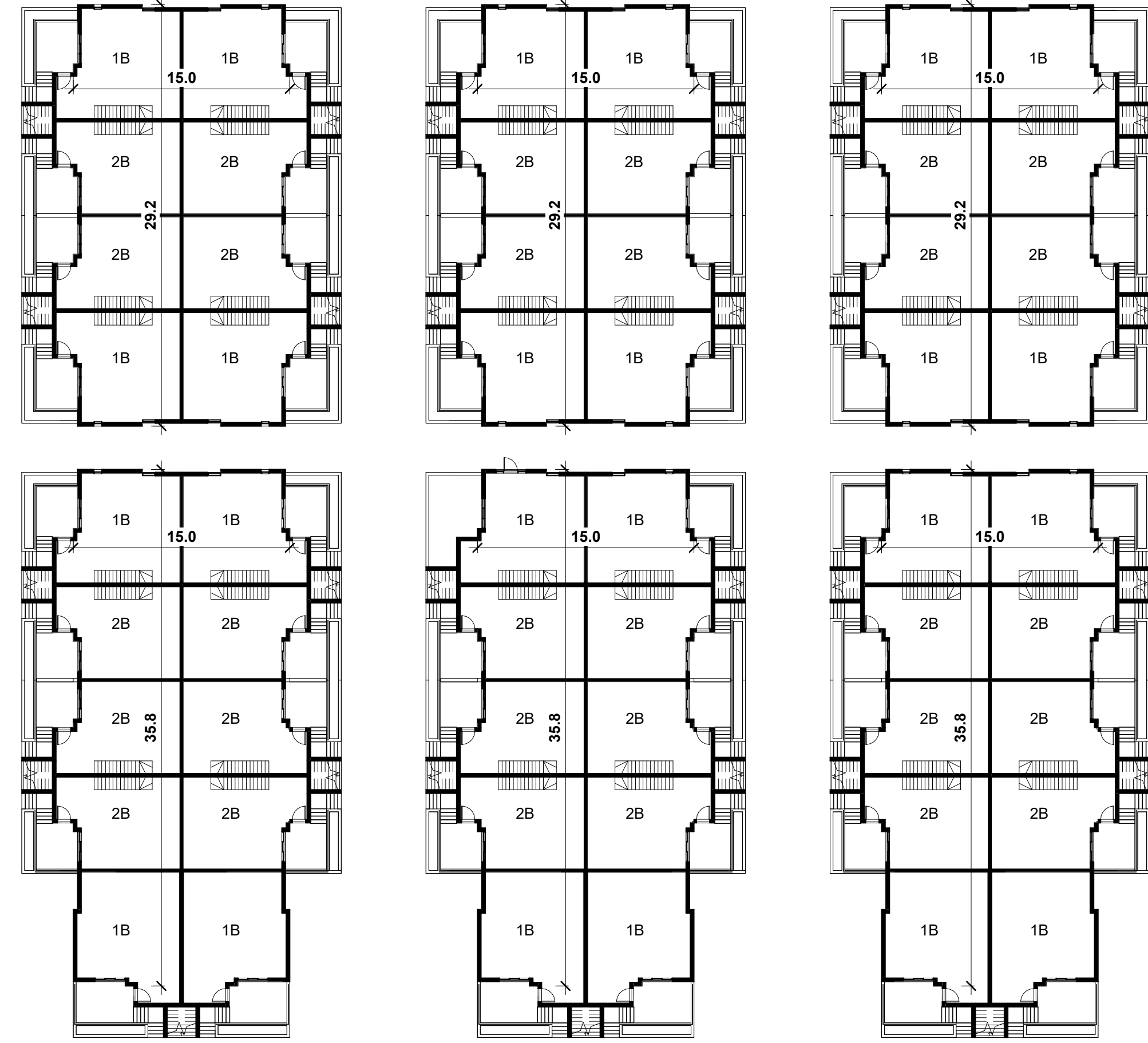
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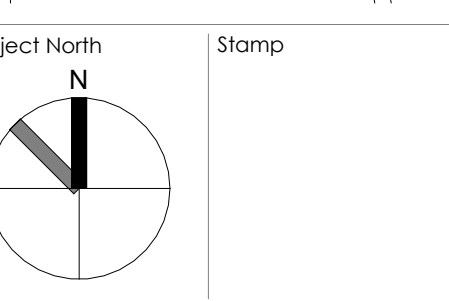
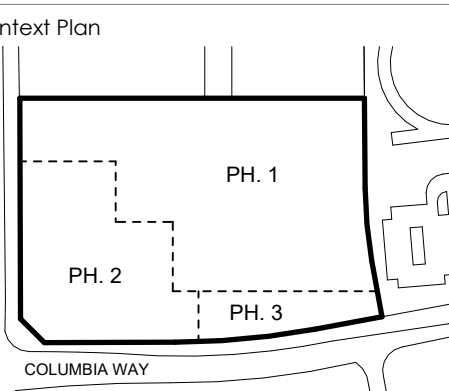
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PHASE 1
PHASE 2



PHASE 1
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GROUND PLAN
PHASE 1, 2, 3

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A103

PHASE 2
PHASE 3

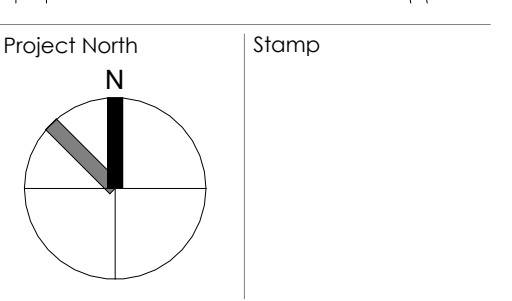
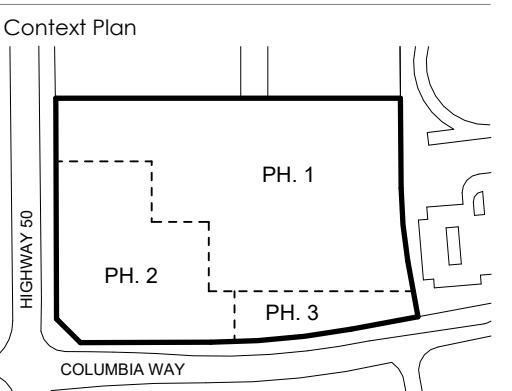
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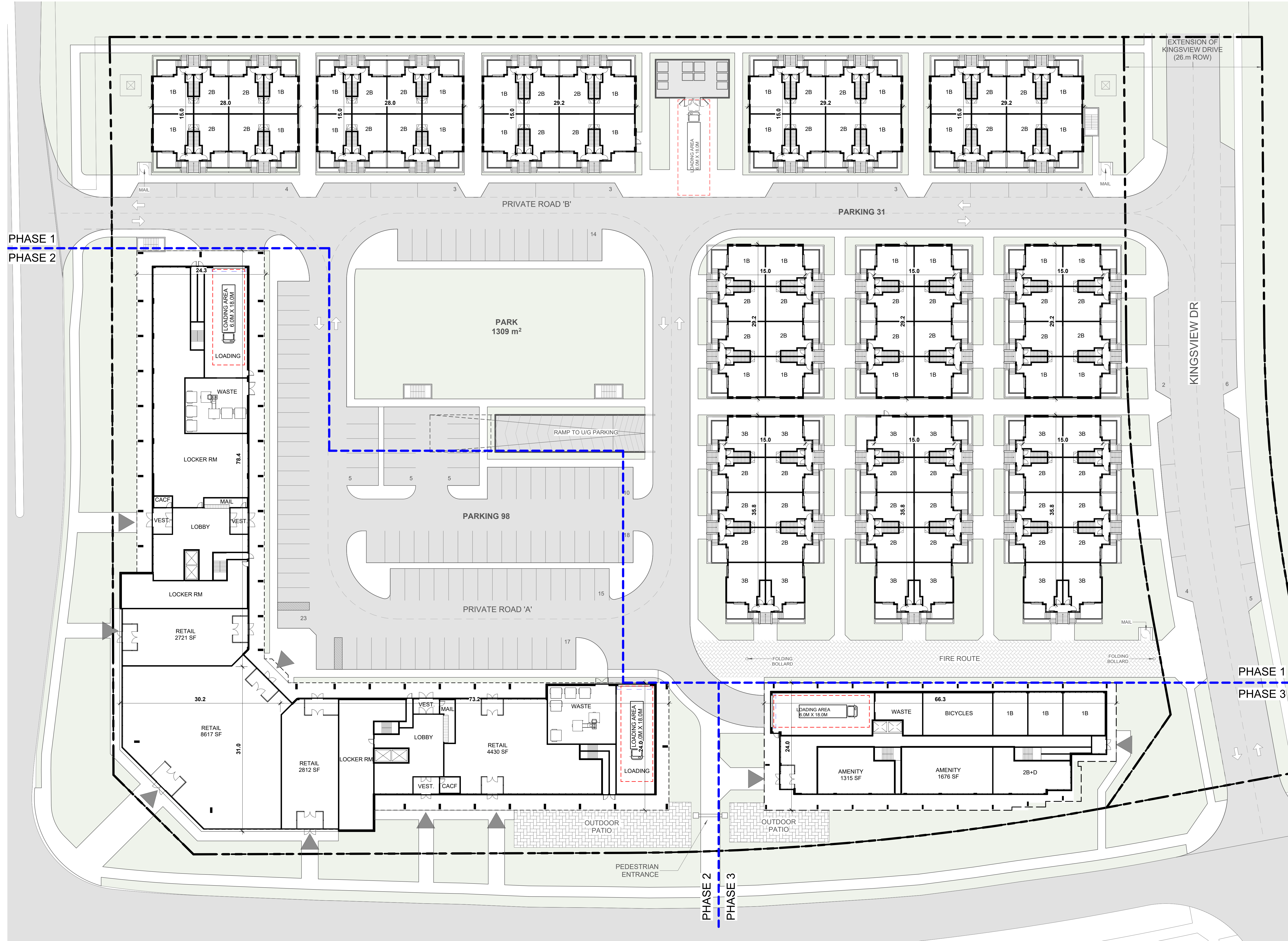
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1ST FLOOR PLAN
 PHASE 1, 2, 3

No. A104



PHASE 1
 PHASE 2

PHASE 1
 PHASE 3

PHASE 2
 PHASE 3

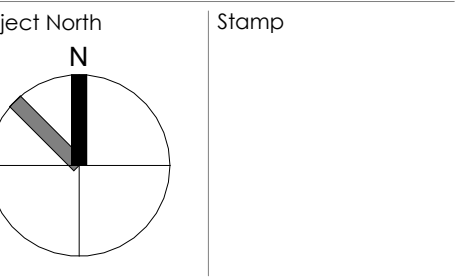
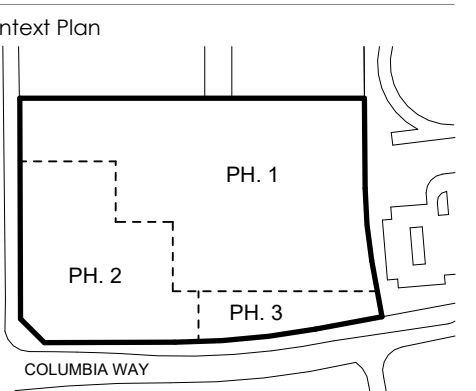
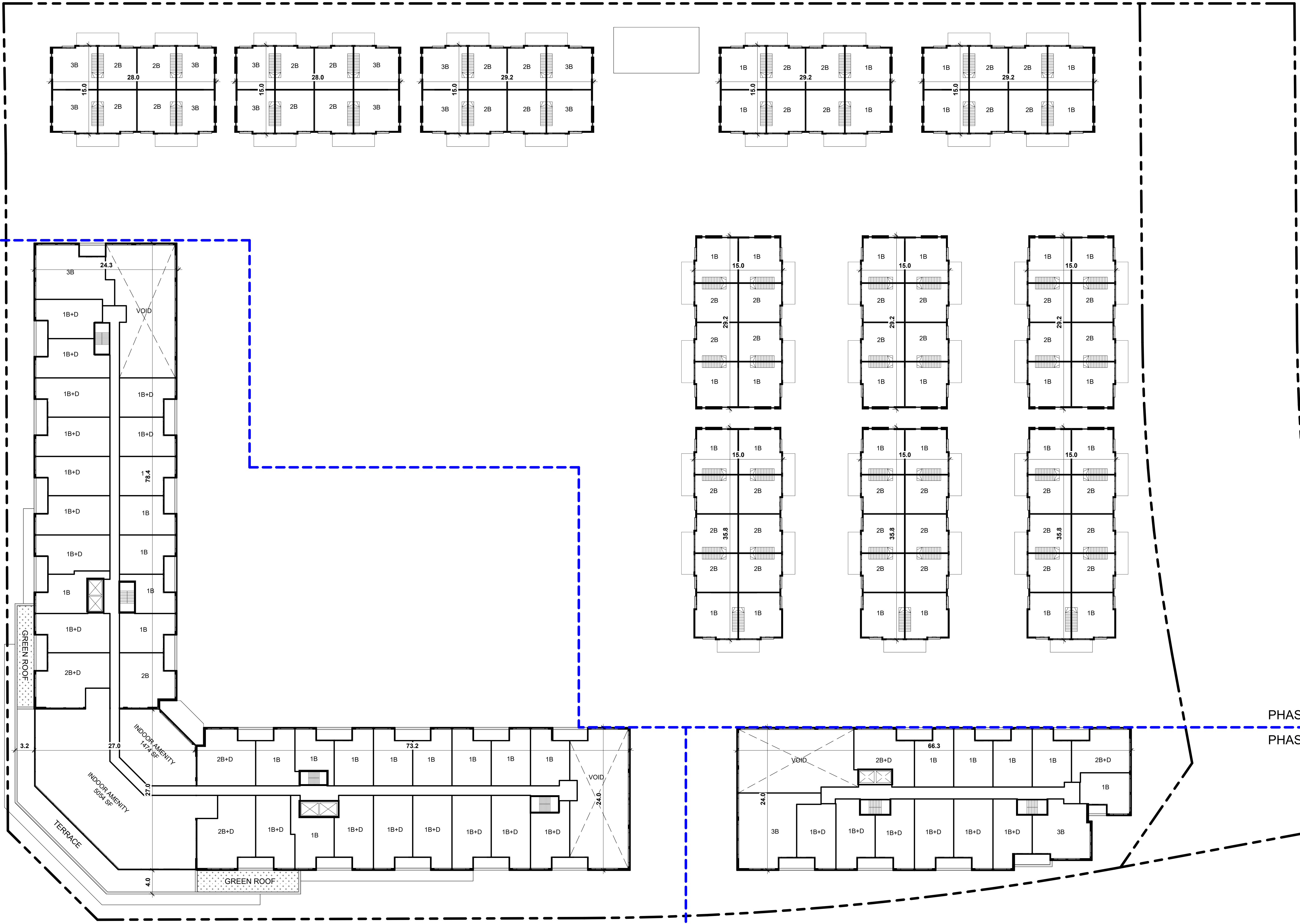
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2ND FLOOR PLAN
PHASE 1, 2, 3

No.
A105

PHASE 2
PHASE 3

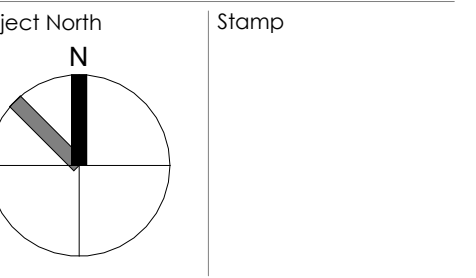
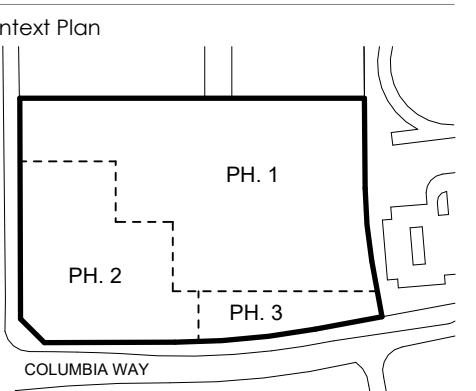
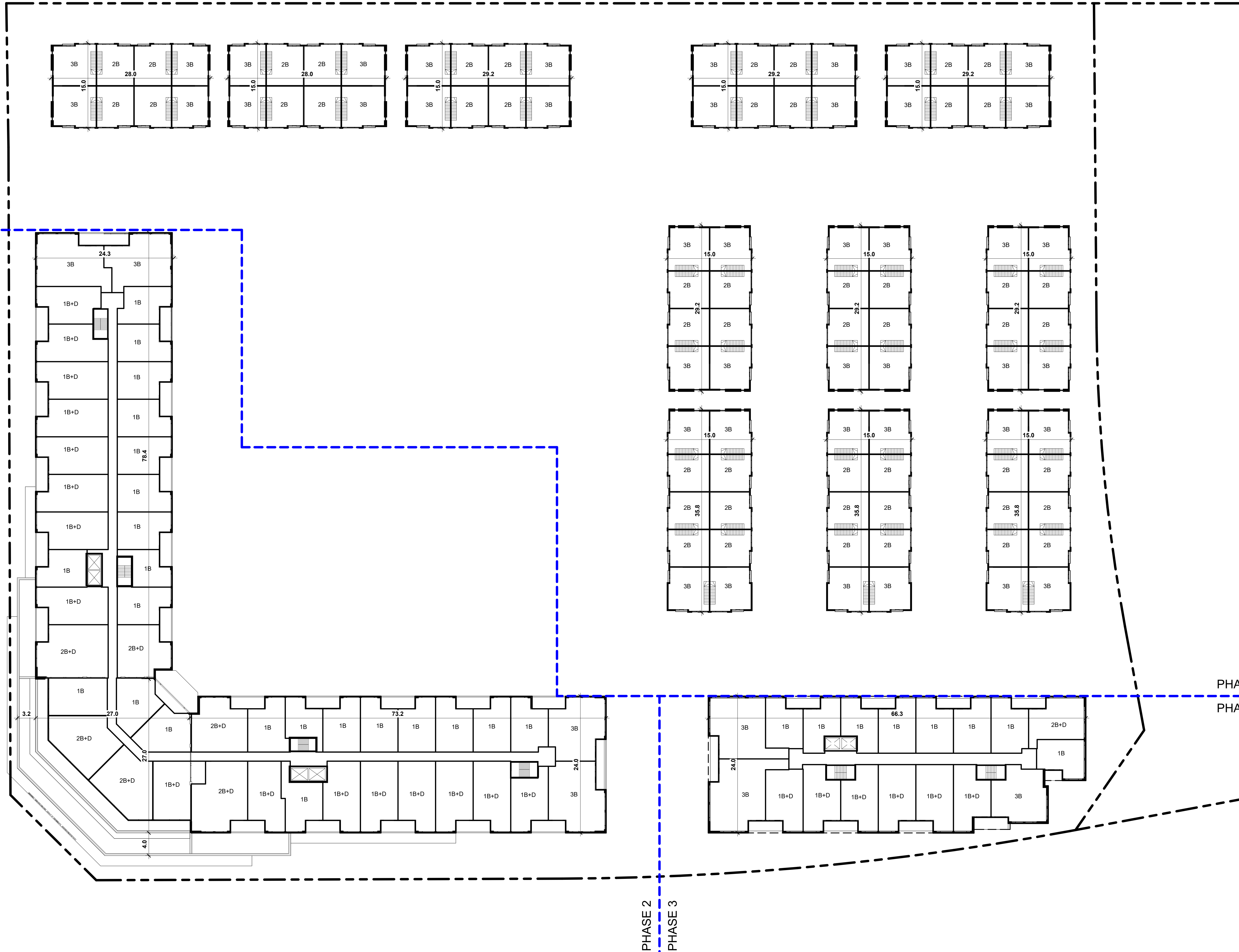
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3RD FLOOR PLAN
PHASE 1, 2, 3

No.

A106

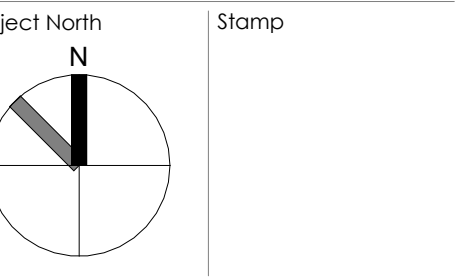
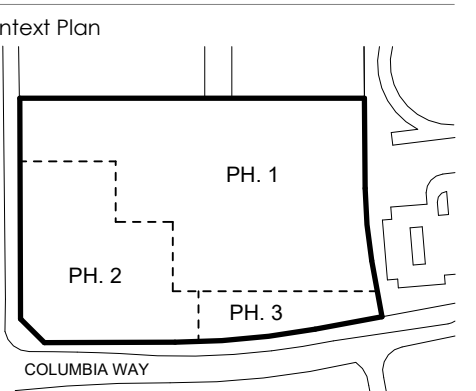
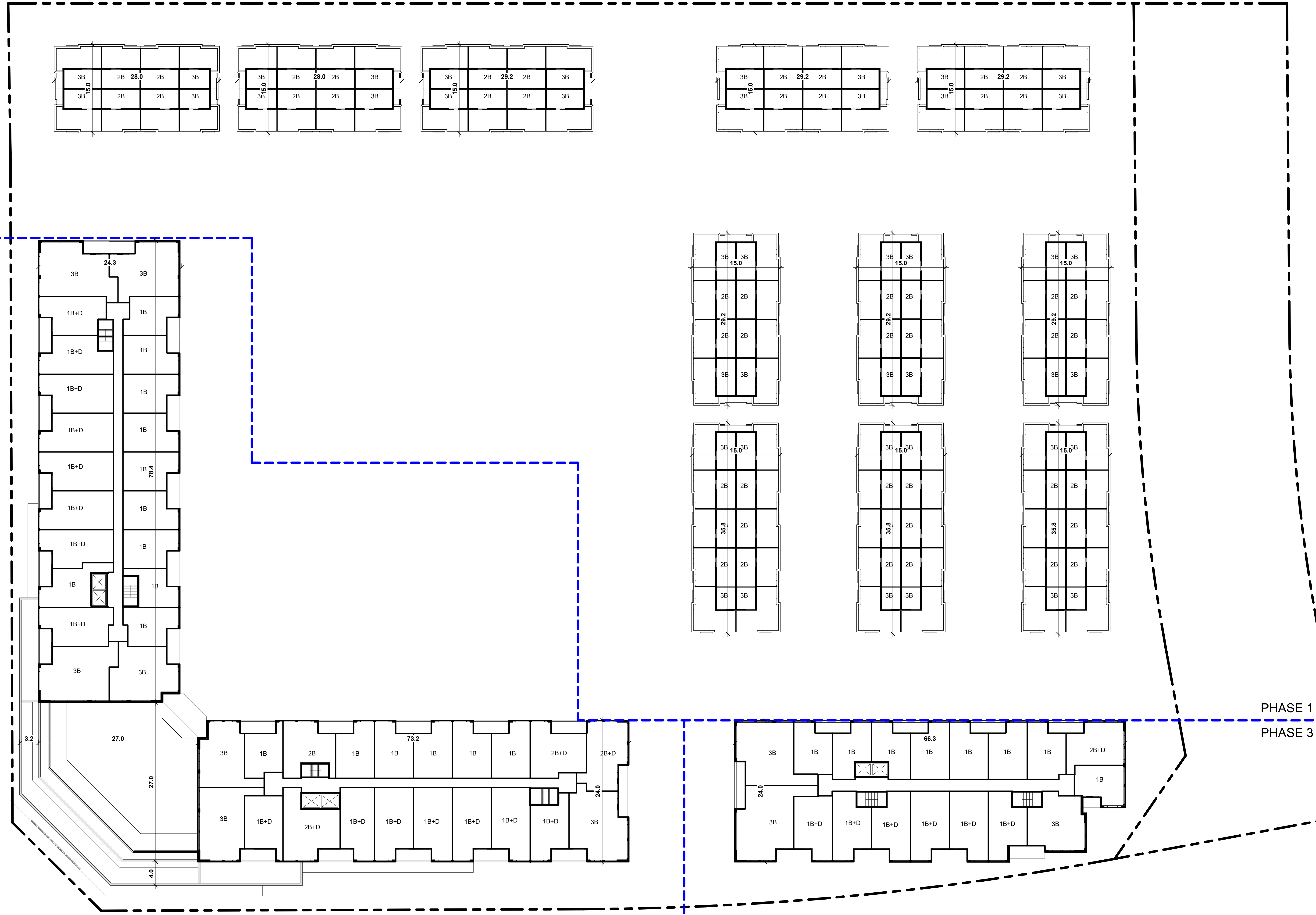
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4TH FLOOR PLAN
PHASE 1, 2, 3

No.
A107

PHASE 2
PHASE 3

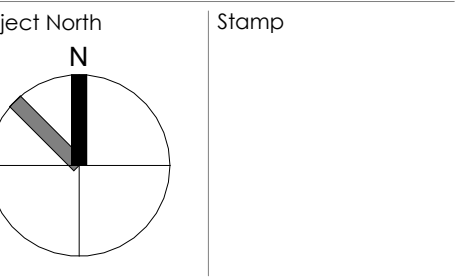
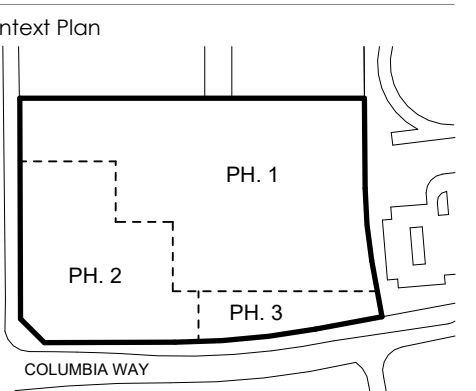
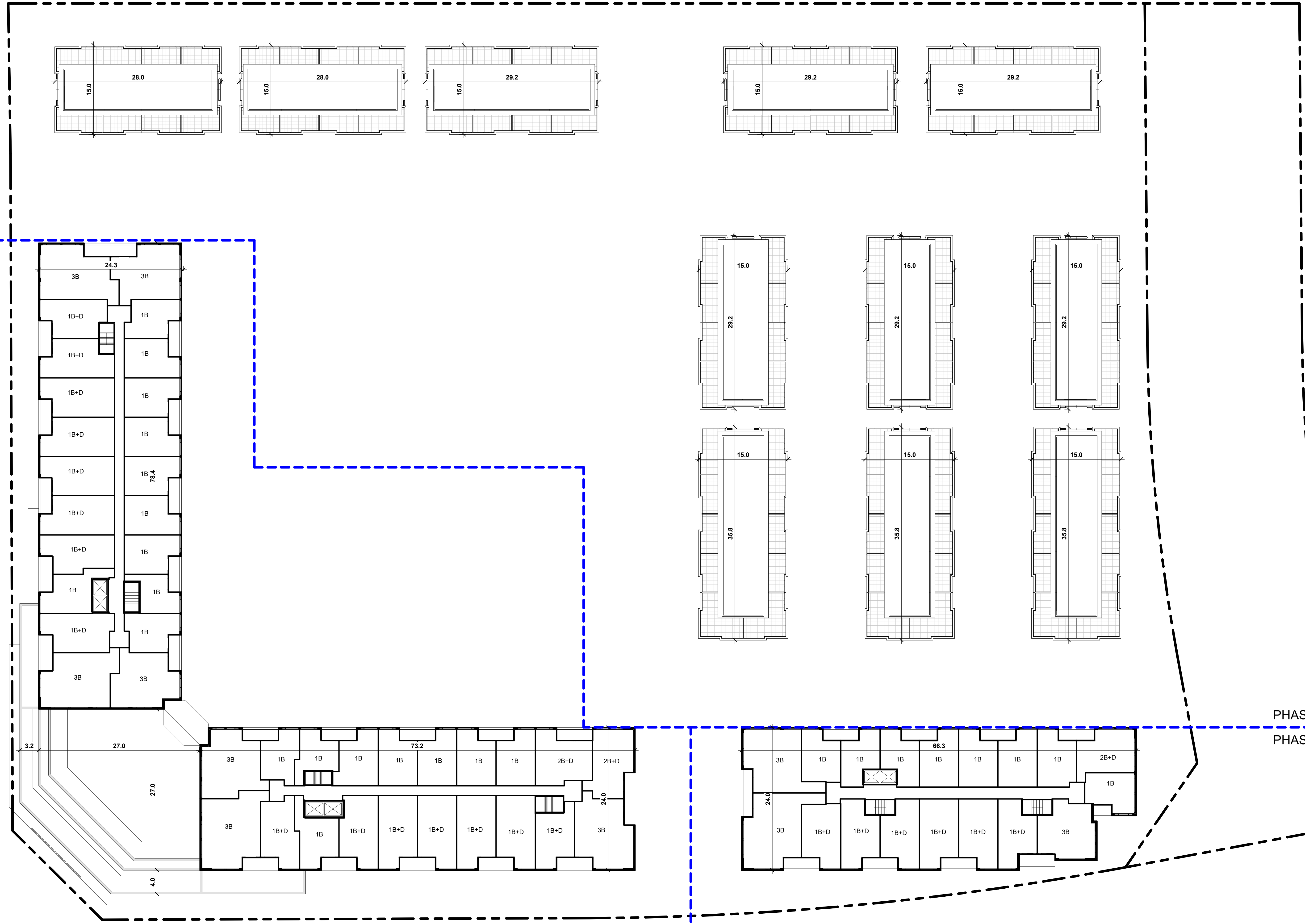
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5TH FLOOR PLAN
PHASE 1, 2, 3

No.
A108

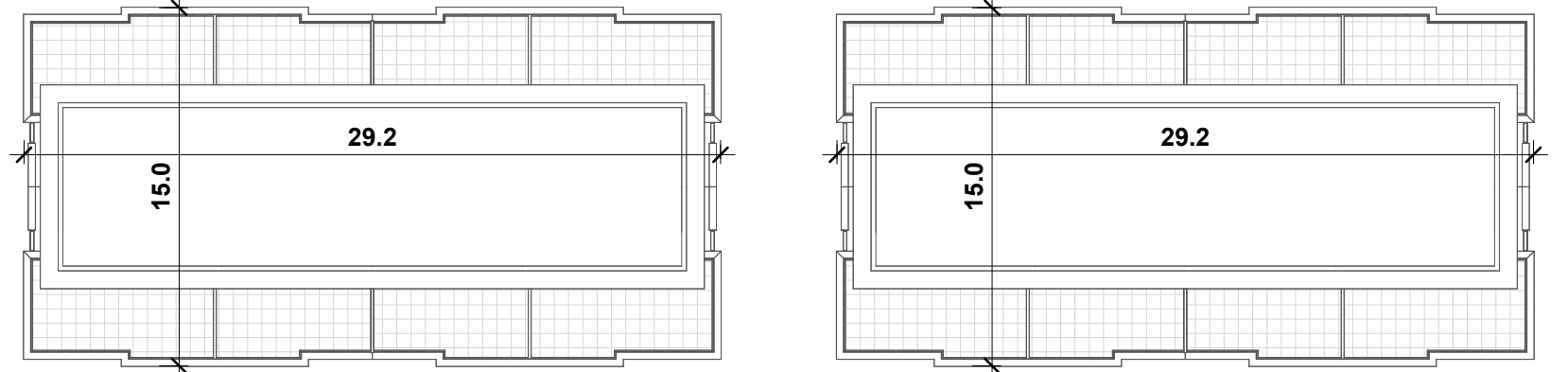
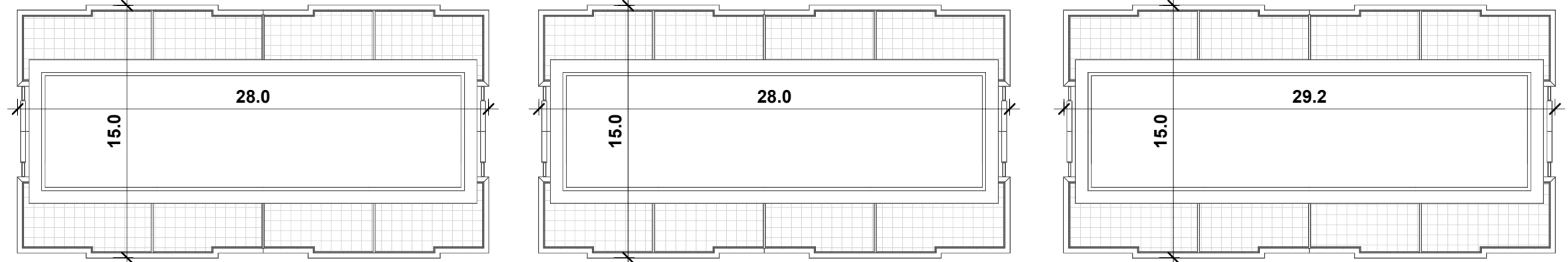
PHASE 2
PHASE 3

COLUMBIA SQUARE

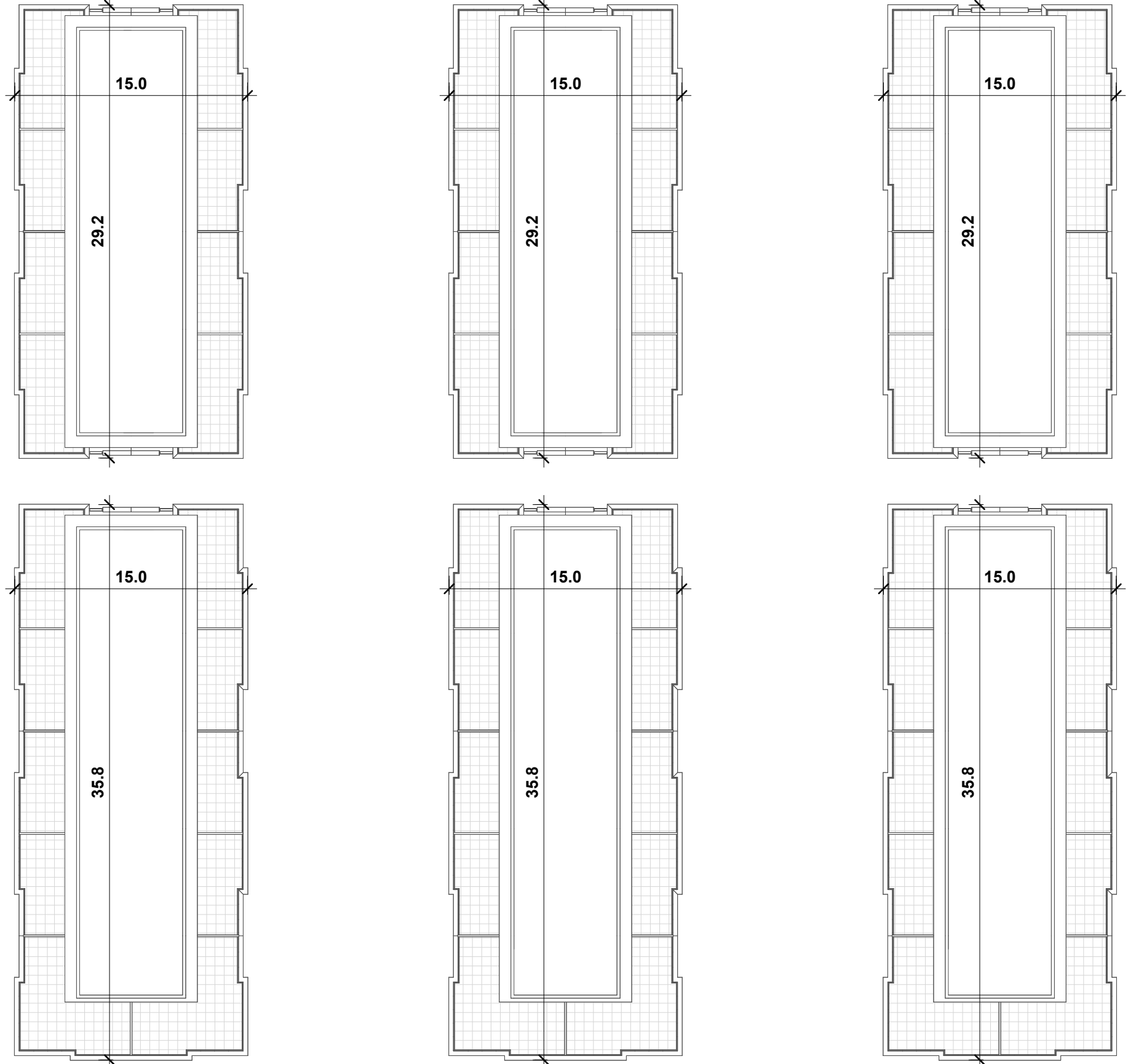
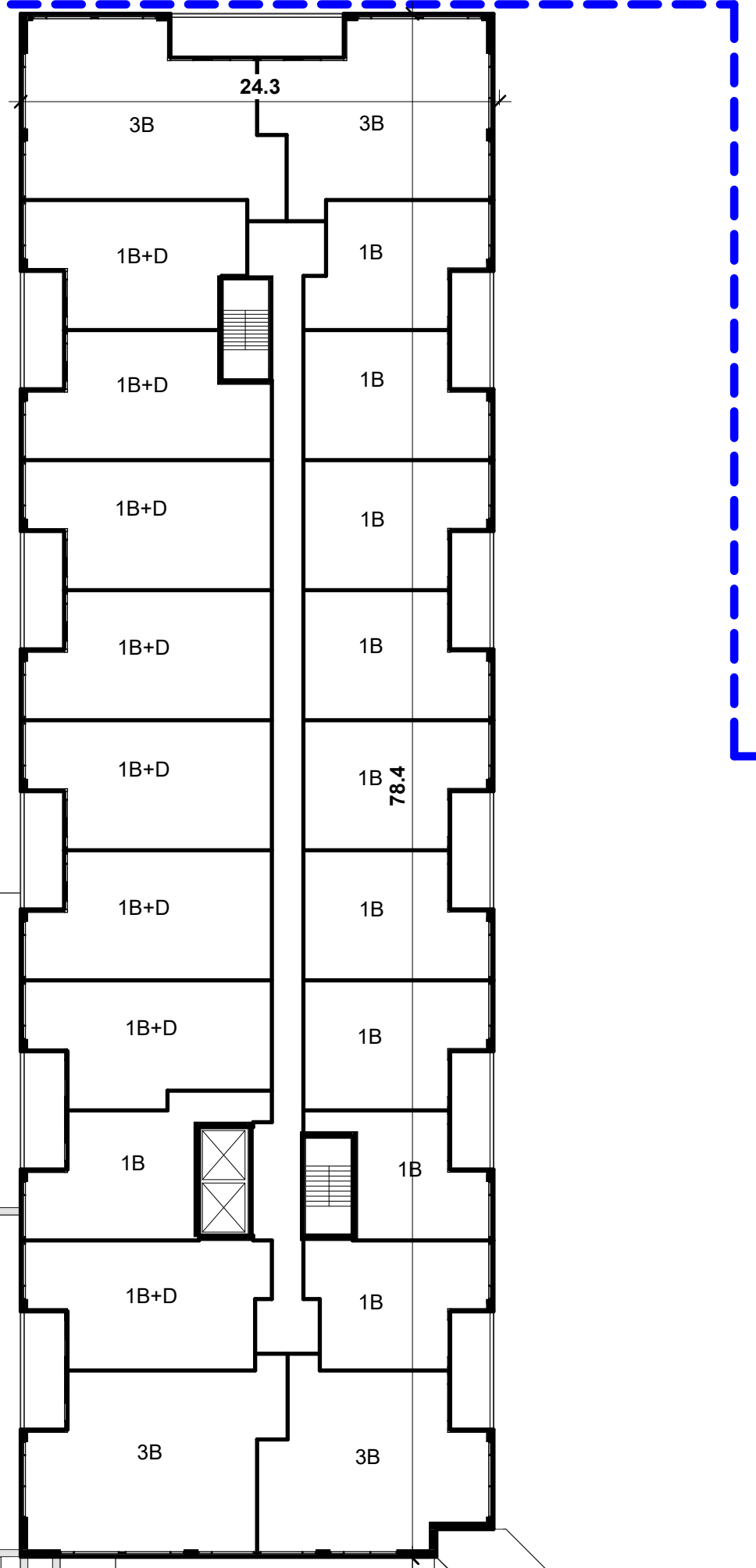
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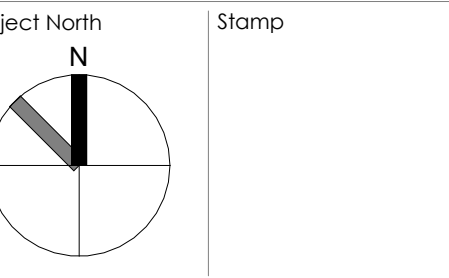
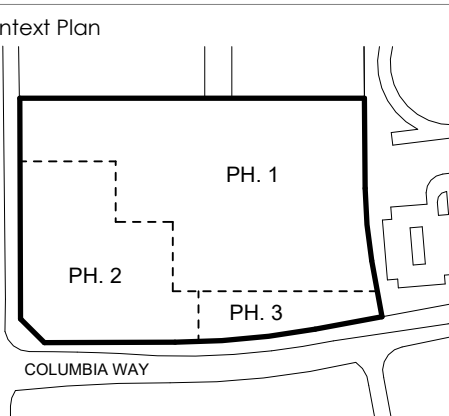
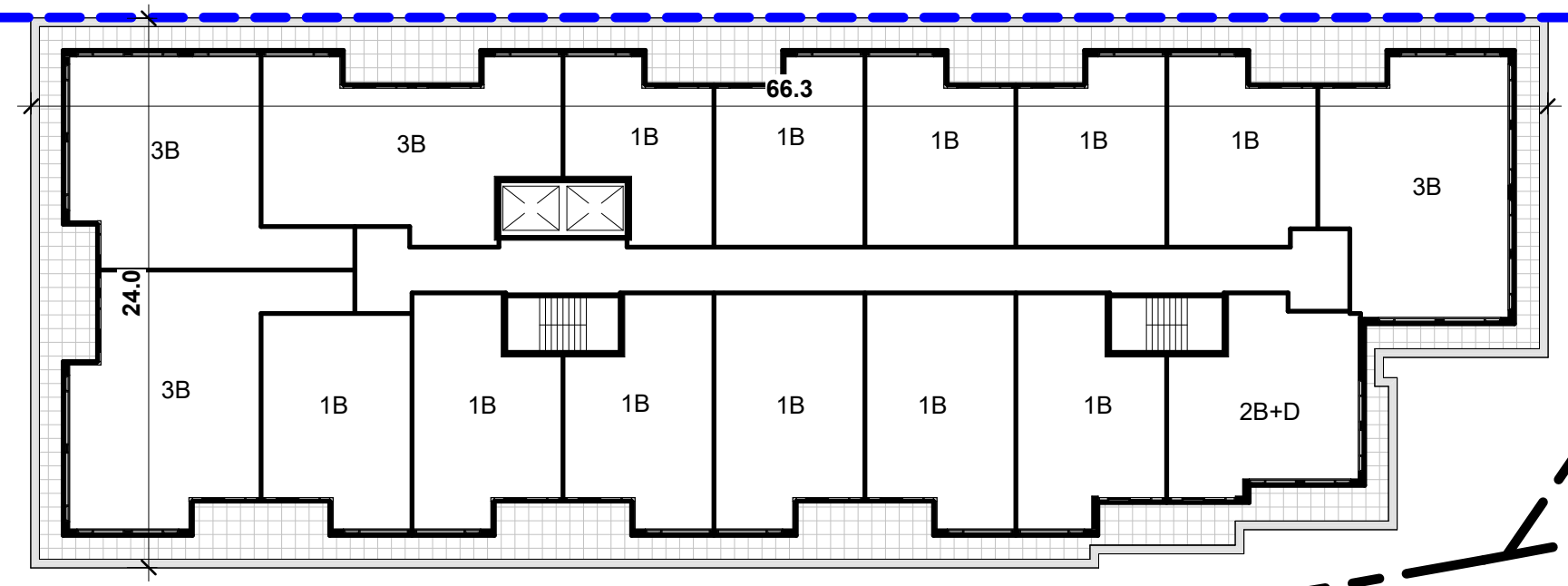
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PHASE 2



PHASE 1
PHASE 3



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8TH FLOOR PLAN
PHASE 1, 2, 3

No.
A111

PHASE 2
PHASE 3

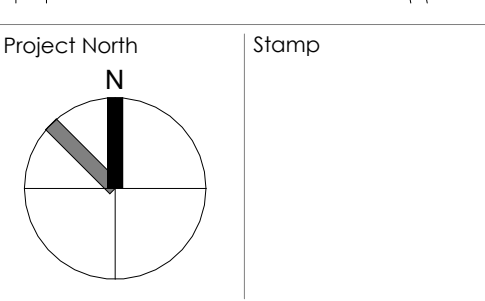
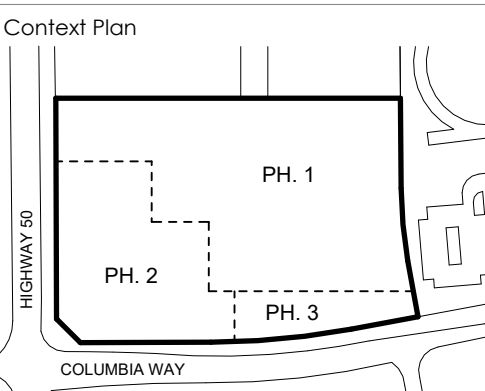
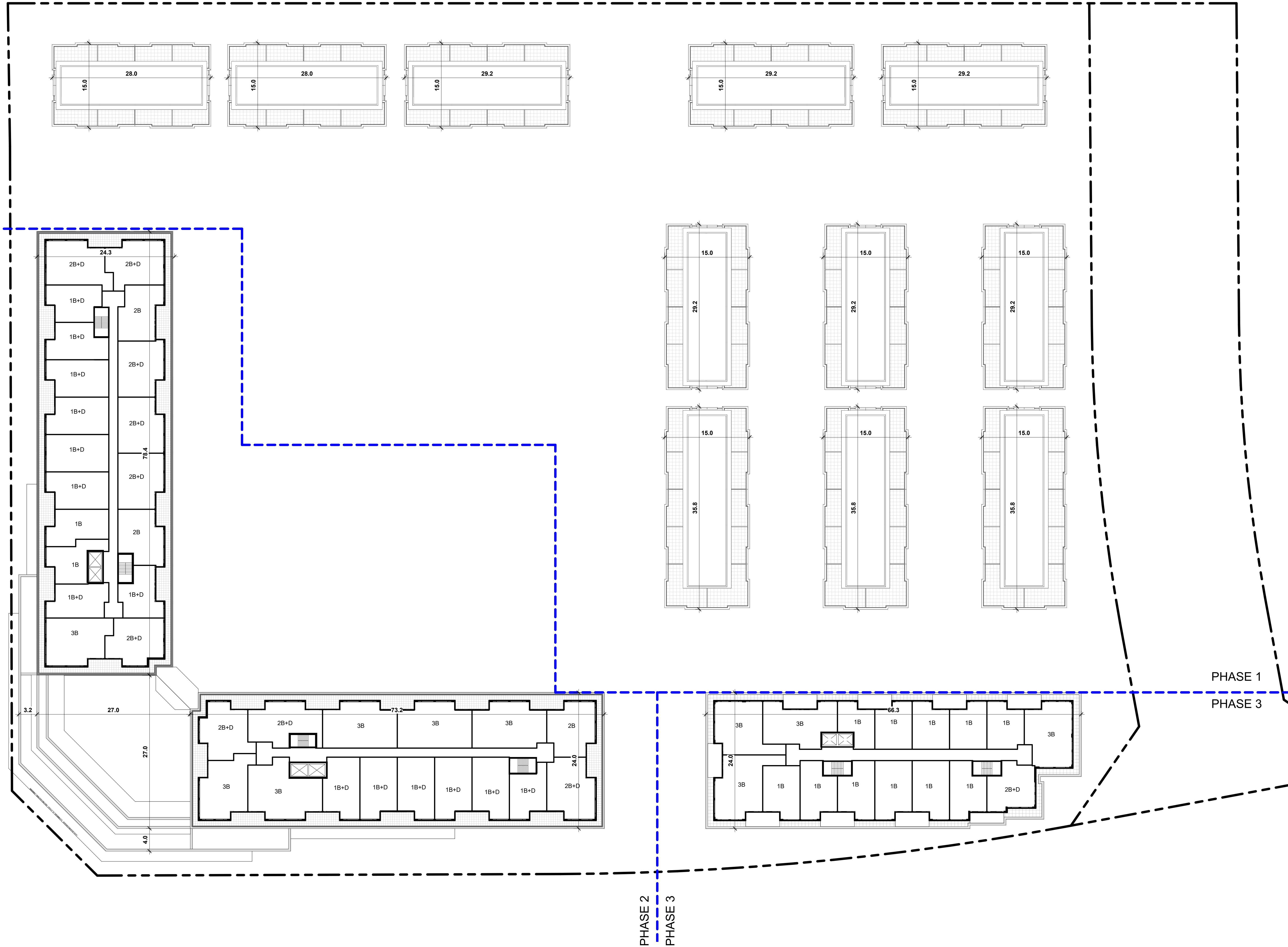
COLUMBIA SQUARE

BOLTON, ONTARIO

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No.	Description	Date
1	ISSUED FOR OPA	2023/12/15

PHASE 1
PHASE 2



Clients
Columbia Square Inc.

KFA
architects + planners inc.
197 CAROLINA AVE - SUITE 500
TORONTO, ON M5T 2C8
416.433.6226 - telephone
www.kfaarchitecture.com

Project No.:	20065
Scale:	1 : 300
Issue Date:	12/01/23
Drawn By:	
Title	

9TH FLOOR PLAN
PHASE 1, 2, 3

No.

A112

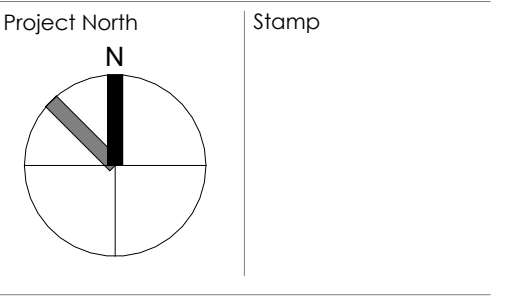
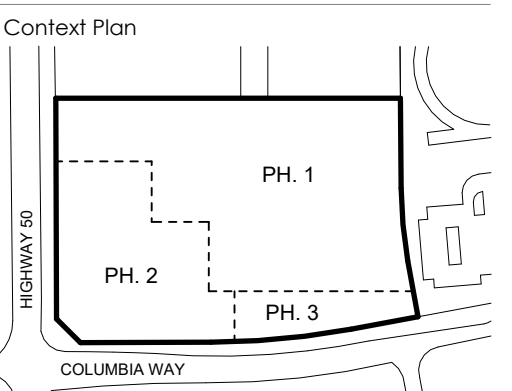
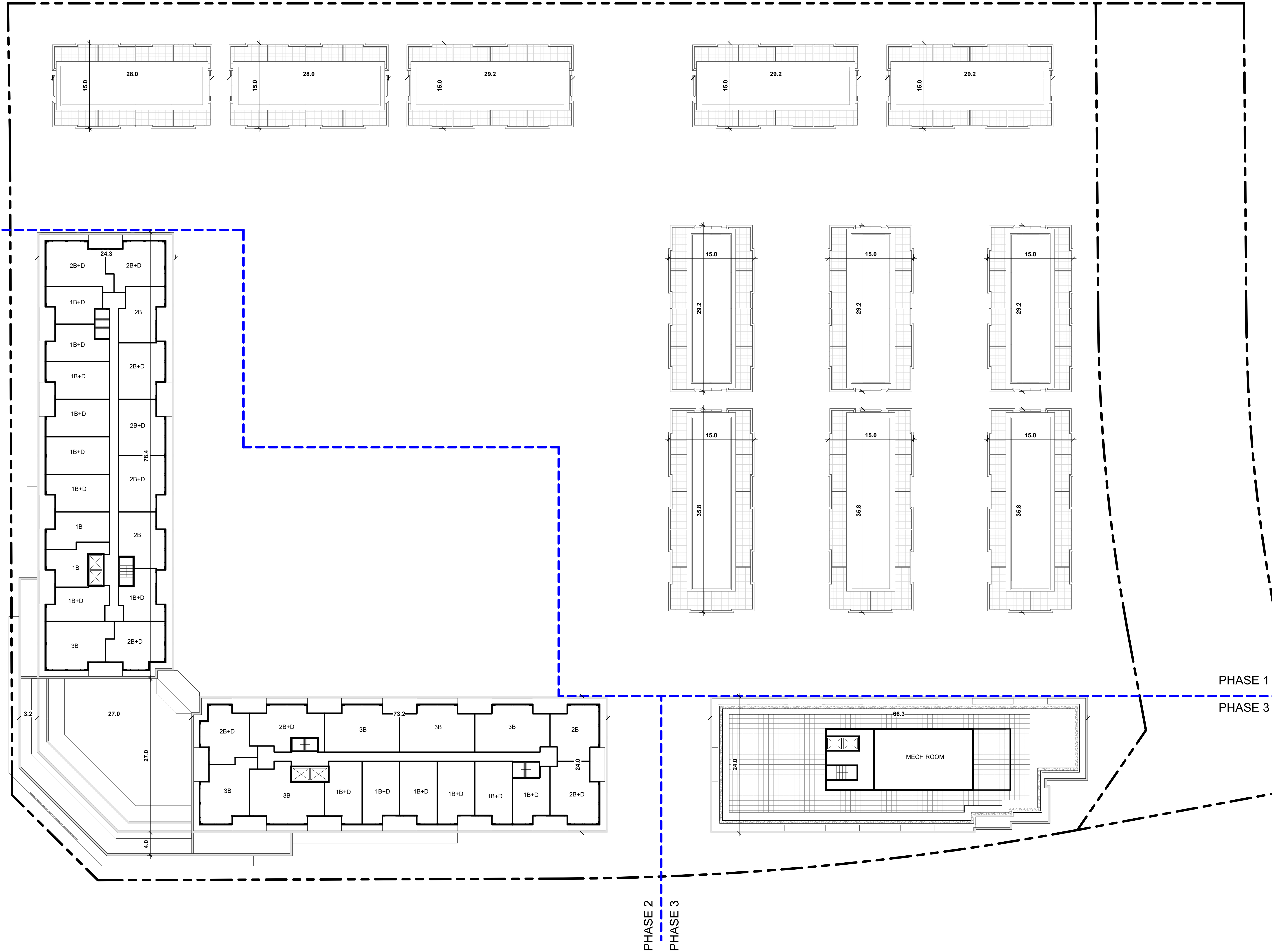
COLUMBIA SQUARE

BOLTON, ONTARIO

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No.	Description	Date
1	ISSUED FOR OPA	2023/12/15

PHASE 1
PHASE 2



PHASE 1

PHASE 3

Clients
Columbia Square Inc.

KFA
architects + planners inc.
187 CAROLINA AVE - SUITE 500
TORONTO, ON M5T 2C8
416.533.6226 - website
www.kfaarchitecture.com

Project No.:	20065
Scale:	1 : 300
Issue Date:	12/01/23
Drawn By:	
Title	

10TH FLOOR PLAN
PHASE 1, 2, 3

No.

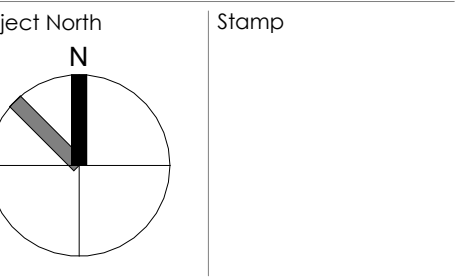
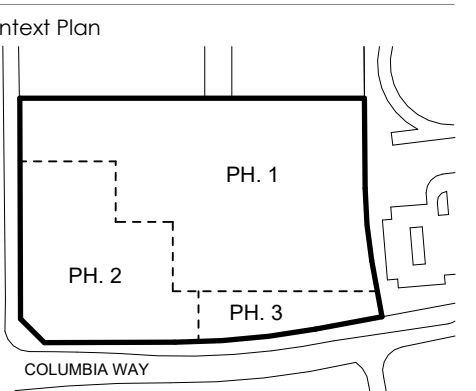
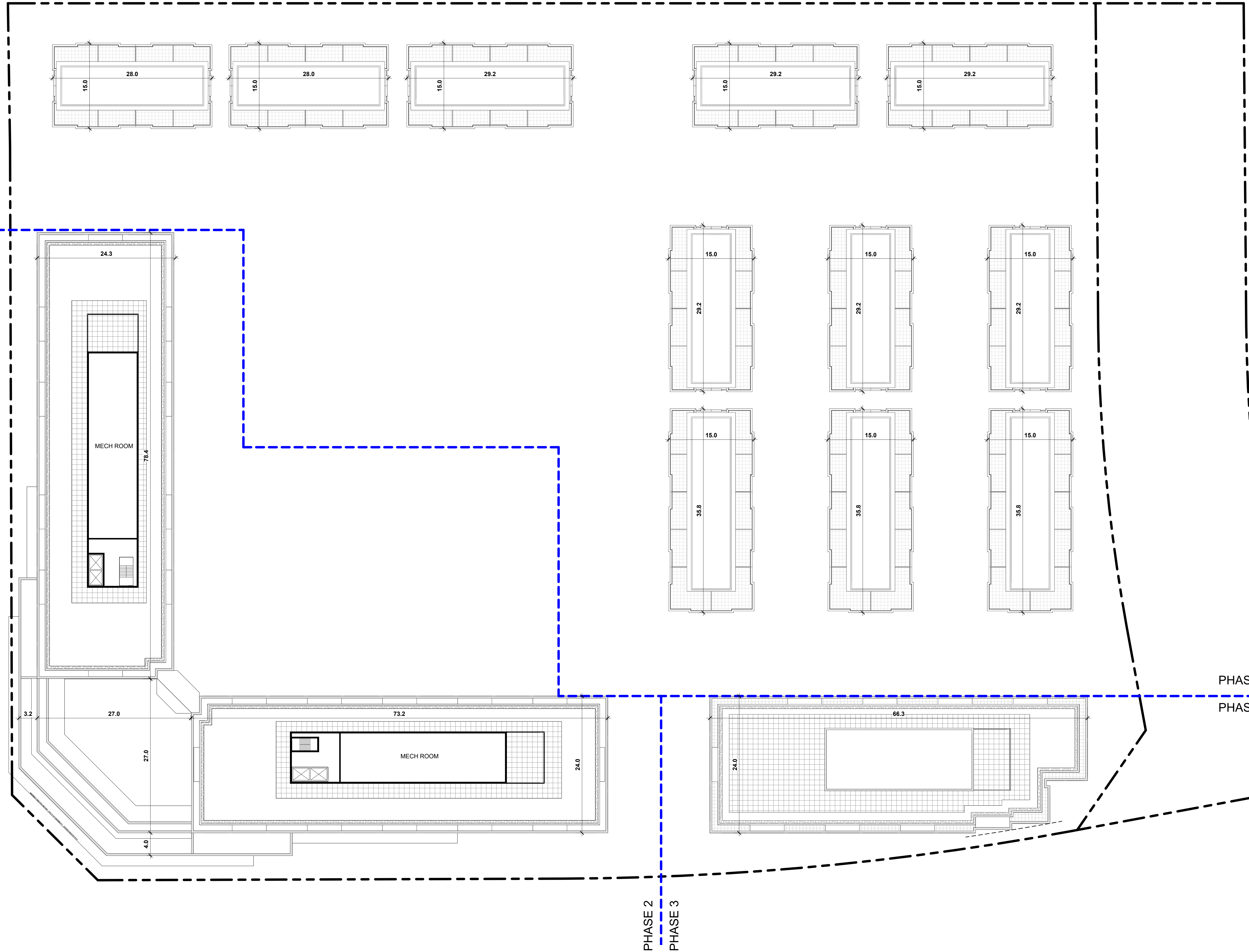
A113

PHASE 2
PHASE 3

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No.	Description	Date
1	ISSUED FOR OPA	2023/12/15

PHASE 1
PHASE 2



PHASE 1
PHASE 3

Clients
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KFA
architects + planners inc.

Project No.: 20065
Scale: 1 : 300
Issue Date: 11/21/2023
Drawn By:
Title

MECH PH FLOOR
PLAN PHASE 1, 2, 3

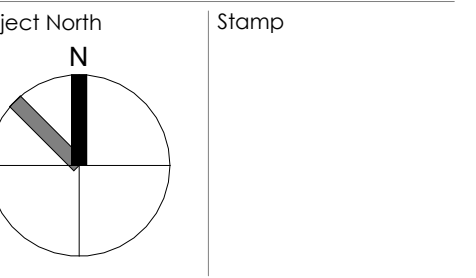
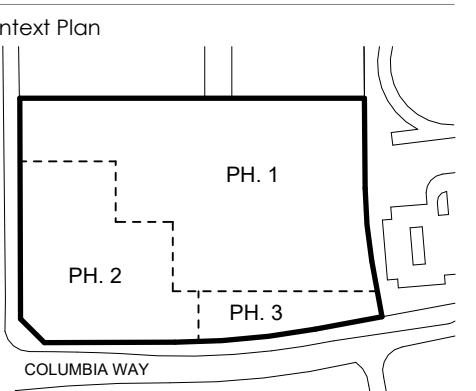
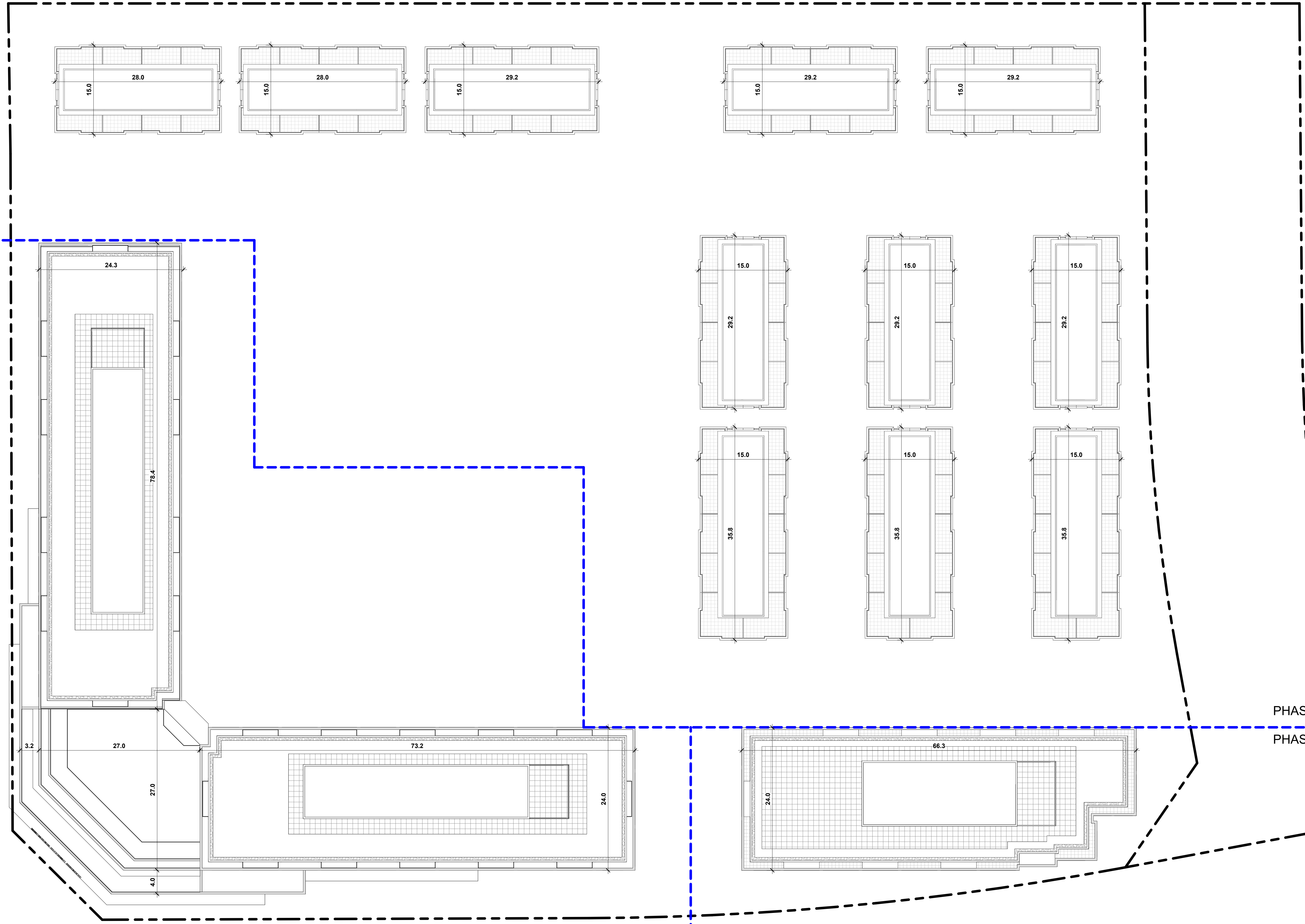
COLUMBIA SQUARE

BOLTON, ONTARIO

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No.	Description	Date
1	ISSUED FOR OPA	2023/12/15

PHASE 1
PHASE 2



Clients
Columbia Square Inc.

KFA
architects + planners inc.

197 SPADINA AVE - SUITE 500
TORONTO - ON M5T 2C8
416.533.6236 - telephone
www.kfastructure.com

Project No.: 20065
Scale: 1 : 300
Issue Date: 11/21/2023
Drawn By:
Title

ROOF PLAN PHASE
1, 2, 3

No.
A115

PHASE 2
PHASE 3

COLUMBIA SQUARE

BOLTON, ONTARIO

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No.	Description	Date
1	ISSUED FOR OPA	2023/12/15

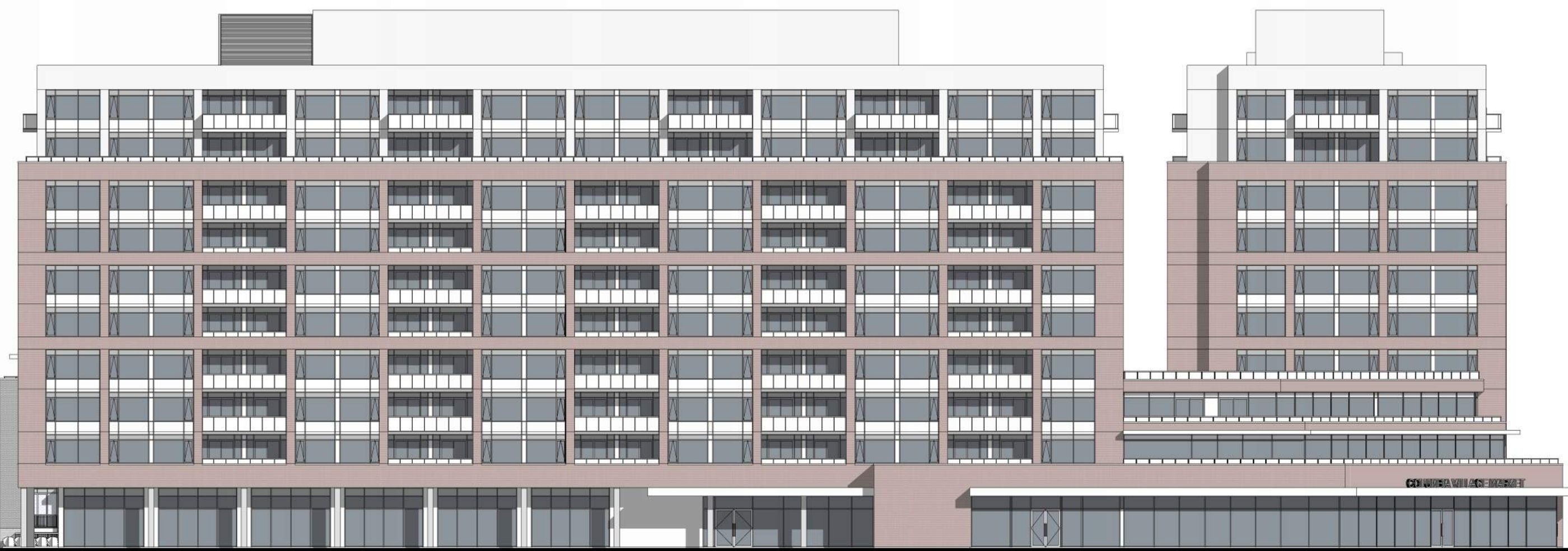
HIGHWAY 50



KINGVIEW DR

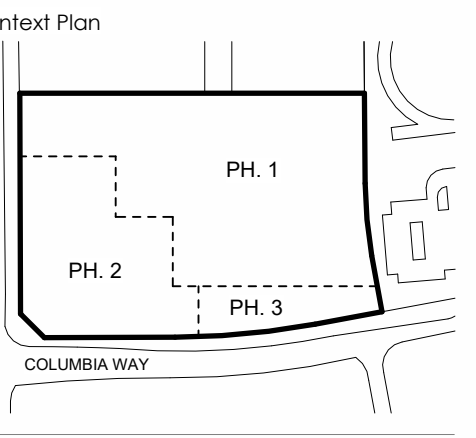
1 Site Elevation - South
1 : 300

PRIVATE RD 'B'



COLUMBIA WAY

2 Site Elevation - West
1 : 300



Project North Stamp

Clients
Columbia Square Inc.

KFA architects + planners inc.
187 SPADINA AVE - SUITE 500
TORONTO - ON M5T 2C8
416.533.6286 - telephone
www.kfastructure.com

Project No.: 20065

Scale: 1 : 300

Issue Date: 07/24/2023

Drawn By:

Title

SITE ELEVATIONS

No.

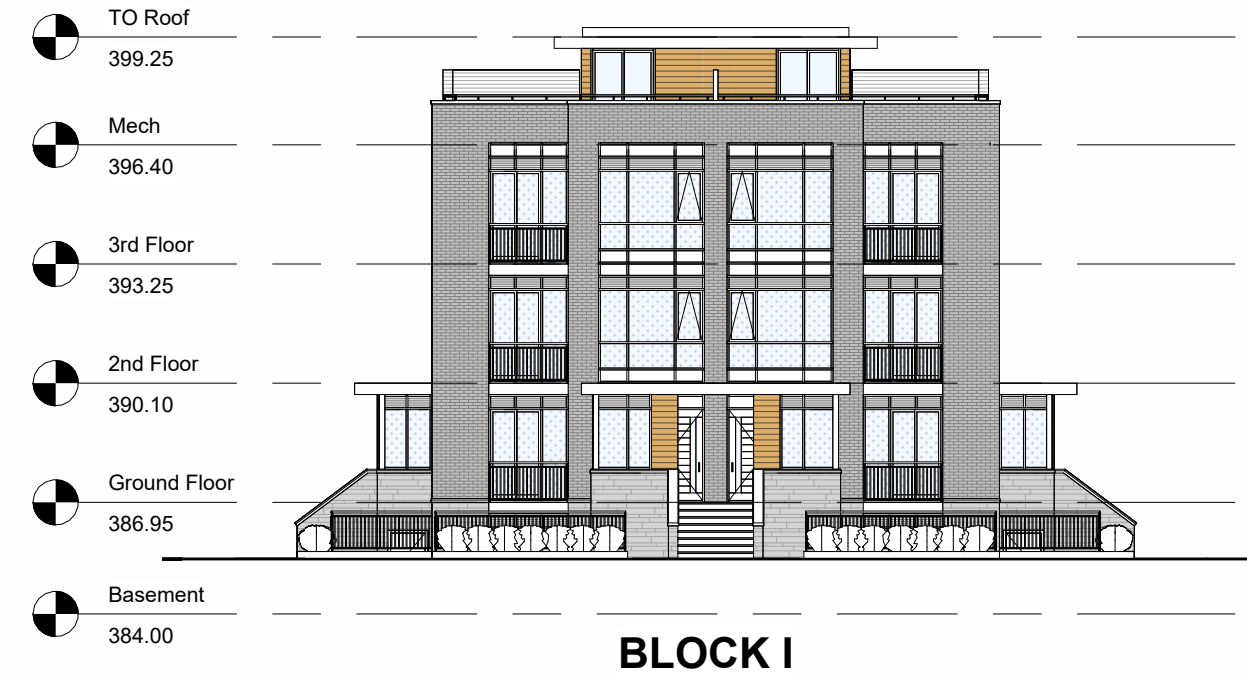
A202

COLUMBIA SQUARE

BOLTON, ONTARIO

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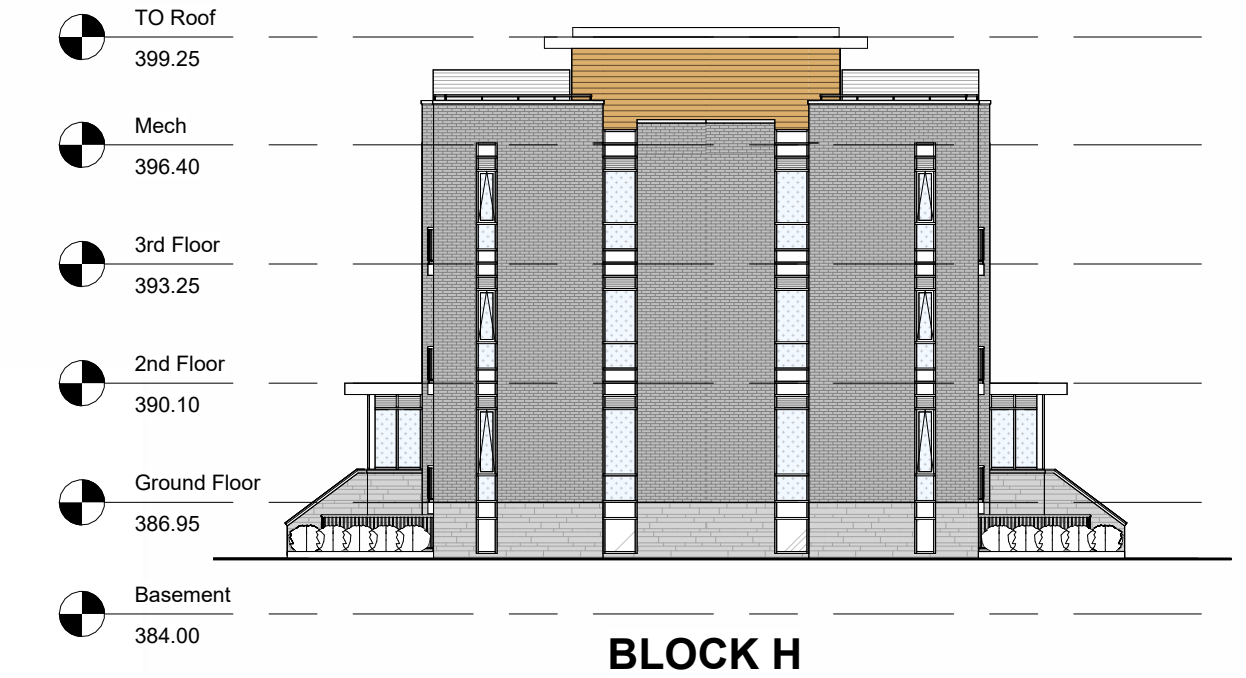
No.	Description	Date
1	ISSUED FOR OPA	2023/12/15



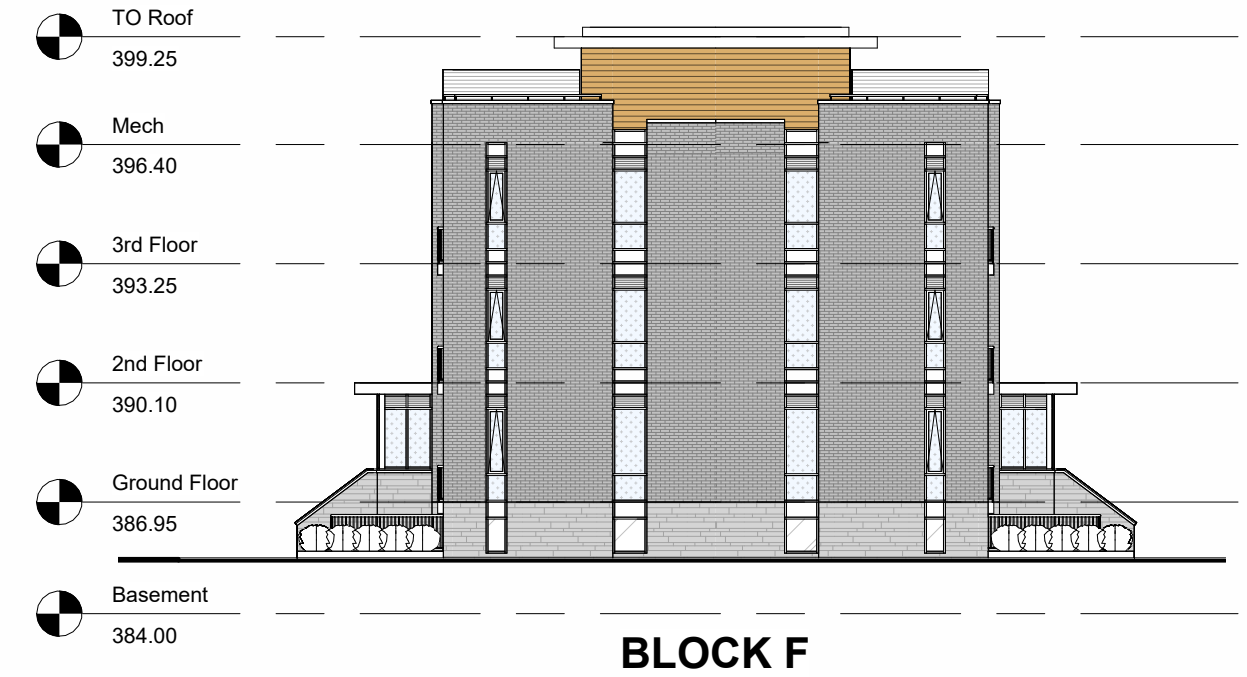
1 South Elevations (Blocks I, J, K)
1 : 200



2 East Elevations (Blocks H, K, G, J, F, I)
1 : 200



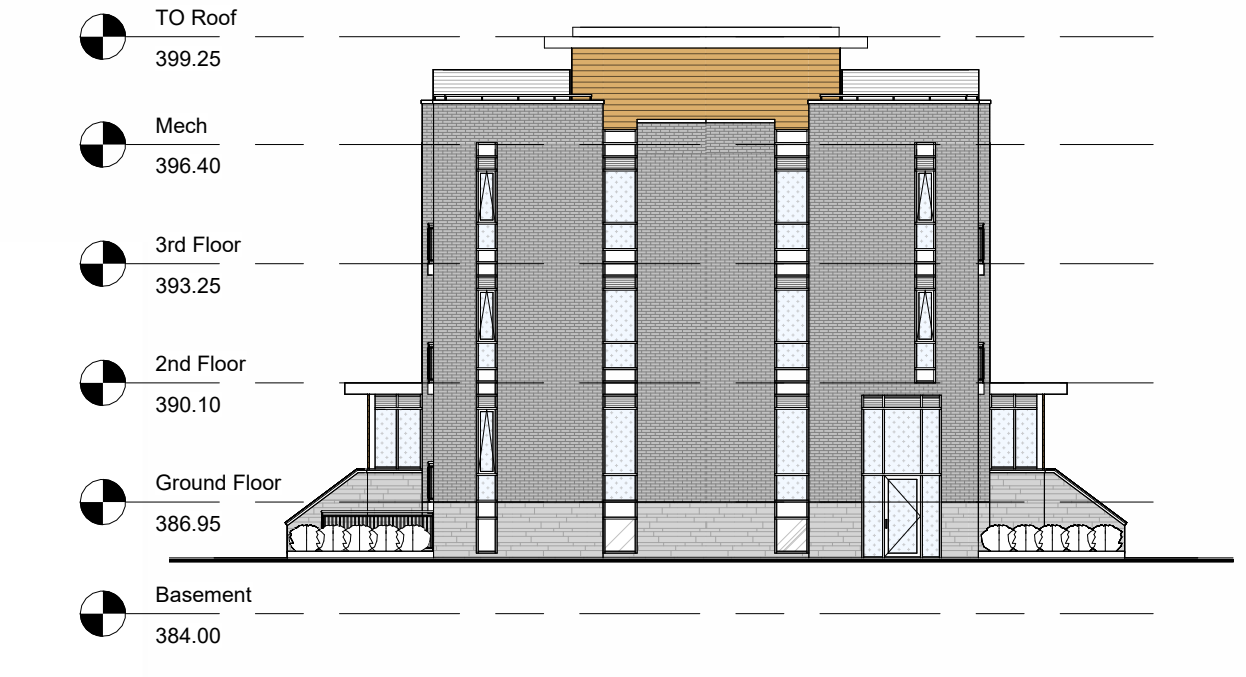
3 North Elevations (Blocks F, G, H, I, K)
1 : 200



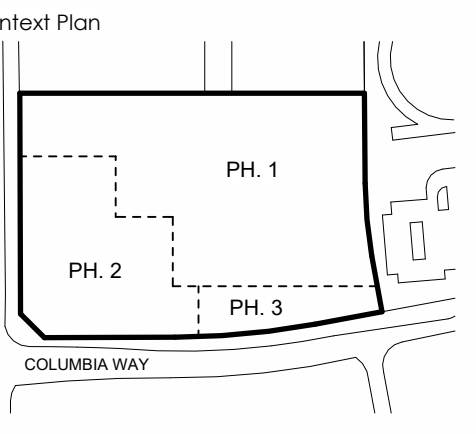
4 South Elevations (Blocks F, G, H)
1 : 200



5 West Elevations (Blocks H, K, G, J, F, I)
1 : 200



6 North Elevation (Block J)
1 : 200



Project North Stamp

Clients
Columbia Square Inc.

KFA architects + planners inc.
187 SPADINA AVE - SUITE 500
TORONTO, ON M5S 2E8
416.533.6236 - telephone
www.kfaarchitecture.com

Project No.: 20065

Scale: 1 : 200

Issue Date: 07/24/2023

Drawn By:

Title

ELEVATIONS PHASE
1

No.
A204

APPENDIX B

ROAD TRAFFIC DATA

Date: May 5, 2021
 From: Greg Dennis, Valcoustics Canada Ltd.
 Re: Traffic Data Request – Highway 50 (0.6 km South of Emil Kolb Parkway)

Greg,
 As per your request, we are providing the following 2019 traffic data:

	Existing	Ultimate
24 Hour Traffic Volume	12,843	16,200
# of Lanes	2	2
Day/Night Split	90/10	90/10
Day Trucks (% of Total Volume)	1.85% Medium 0.68% Heavy	1.85% Medium 0.68% Heavy
Night Trucks (% of Total Volume)	1.75% Medium 0.31% Heavy	1.75% Medium 0.31% Heavy
Right-of-Way Width	36 metres	
Posted Speed Limit	60 km/h	

Please note:

1. The current volume is not the Annual Average Daily Traffic, but the averaged raw volumes over three data collection days. If you need the Annual Average Traffic Volume, please visit the Peel Open Data website below:
<http://opendata.peelregion.ca/data-categories/transportation/traffic-count-stations.aspx>
2. The ultimate volume is the planned volume during a level of service 'D' where a 2 second vehicle headway and a volume to capacity ratio of 0.9 is assumed. Traffic signals and hourly variations in traffic are also incorporated into the ultimate volume.

If you require further assistance, please contact me at robert.jay@peelregion.ca.

Regards,

Robbie Jay
 Transportation Planner, Transportation System Planning
 Transportation Division, Public Works Services, Region of Peel
 10 Peel Centre Drive, Suite B, 4th Floor
 Brampton, ON L6T 4B9
 W: (905) 791-7800 x6456
 E: robert.jay@peelregion.ca

Greg Dennis

From: Saha, Ucchas <ucchas.saha@peelregion.ca>
Sent: November 7, 2023 1:14 PM
To: Greg Dennis
Cc: Nevland, Erik; ZZL-Transportation Planning Data
Subject: RE: Traffic Data Request - Hwy 50 & Columbia Way, Caledon-Noise (VCL File: 1210047.000)

Hello Greg,

Thanks for reaching out. Just wanted to confirm that the traffic data from 2021 is still valid.

Regards,

Ucchas Saha, MASC
Transportation Planner, Transportation Planning
Transportation Division, Public Works
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON L6T 4B9
905-791-7800 x8906 | ucchas.saha@peelregion.ca



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From: Greg Dennis <greg@valcoustics.com>
Sent: November 7, 2023 8:56 AM
To: Nevland, Erik <erik.nevland@peelregion.ca>
Cc: yiyang.hu@peelregion.ca
Subject: RE: Traffic Data Request - Hwy 50 & Columbia Way, Caledon-Noise (VCL File: 1210047.000)

CAUTION: EXTERNAL MAIL. DO NOT CLICK ON LINKS OR OPEN ATTACHMENTS YOU DO NOT TRUST.

Hi Erik,

We are updating a noise study for a proposed residential development at the northeast corner of the intersection of Hwy 50 & Columbia Way. Can you confirm if the attached traffic data from 2021 is still valid?

Thank you,

Greg Dennis, P.Eng.
Acoustical Engineer



30 Wertheim Court, Unit 25
Richmond Hill, Ontario
Canada L4B 1B9
Tel: 905-764-5223 ext. 236
Fax: 905-764-6813
greg@valcoustics.com

From: Jay, Robert <robert.jay@peelregion.ca>
Sent: Wednesday, May 5, 2021 11:25 AM
To: Greg Dennis (VCL) <greg@valcoustics.com>
Cc: Kuczynski, Roman <roman.kuczynski@peelregion.ca>; Chen, Tiggy <tiggy.chen@peelregion.ca>
Subject: RE: Traffic Data Request - Hwy 50 & Columbia Way, Caledon-Noise (VCL File: 1210047.000)

Hi Greg,

As requested, I have attached our 2019 traffic data for Highway 50 north of Columbia Way.

Thank you,

Robbie Jay

Transportation Planner
Transportation System Planning
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON L6T 4B9
(905) 791-7800 x6456
robert.jay@peelregion.ca

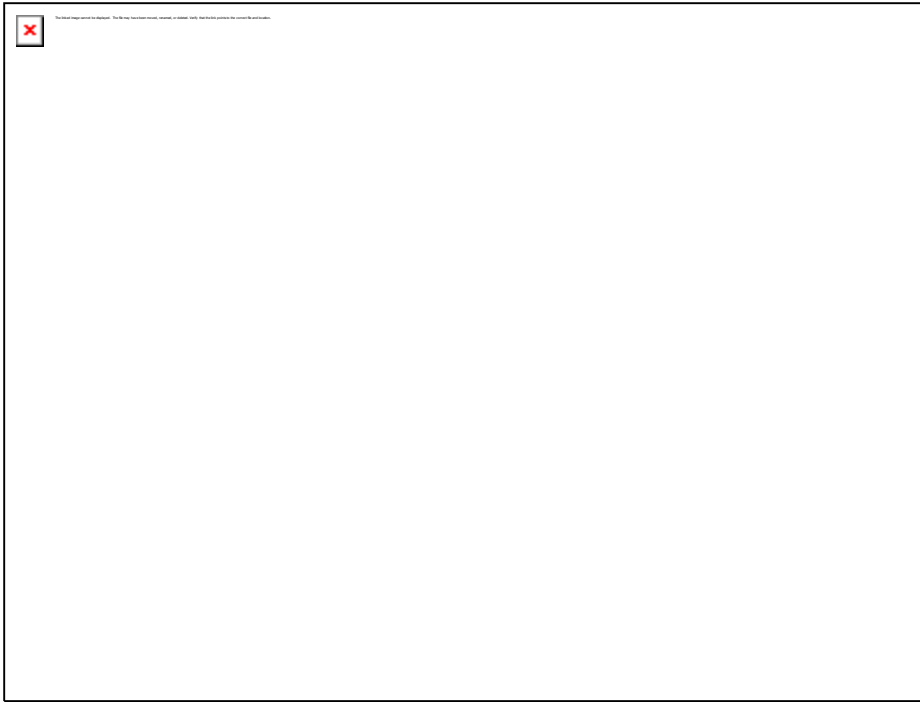


From: Greg Dennis (VCL) <greg@valcoustics.com>
Sent: May 5, 2021 10:40 AM
To: Kuczynski, Roman <roman.kuczynski@peelregion.ca>
Cc: Chen, Tiggy <tiggy.chen@peelregion.ca>
Subject: Traffic Data Request - Hwy 50 & Columbia Way, Caledon-Noise (VCL File: 1210047.000)

CAUTION: EXTERNAL MAIL. DO NOT CLICK ON LINKS OR OPEN ATTACHMENTS YOU DO NOT TRUST.

Hi Roman,

I am working on a noise study for a proposed mixed-use development at the northeast corner of Hwy 50 and Columbia Way, Caledon.



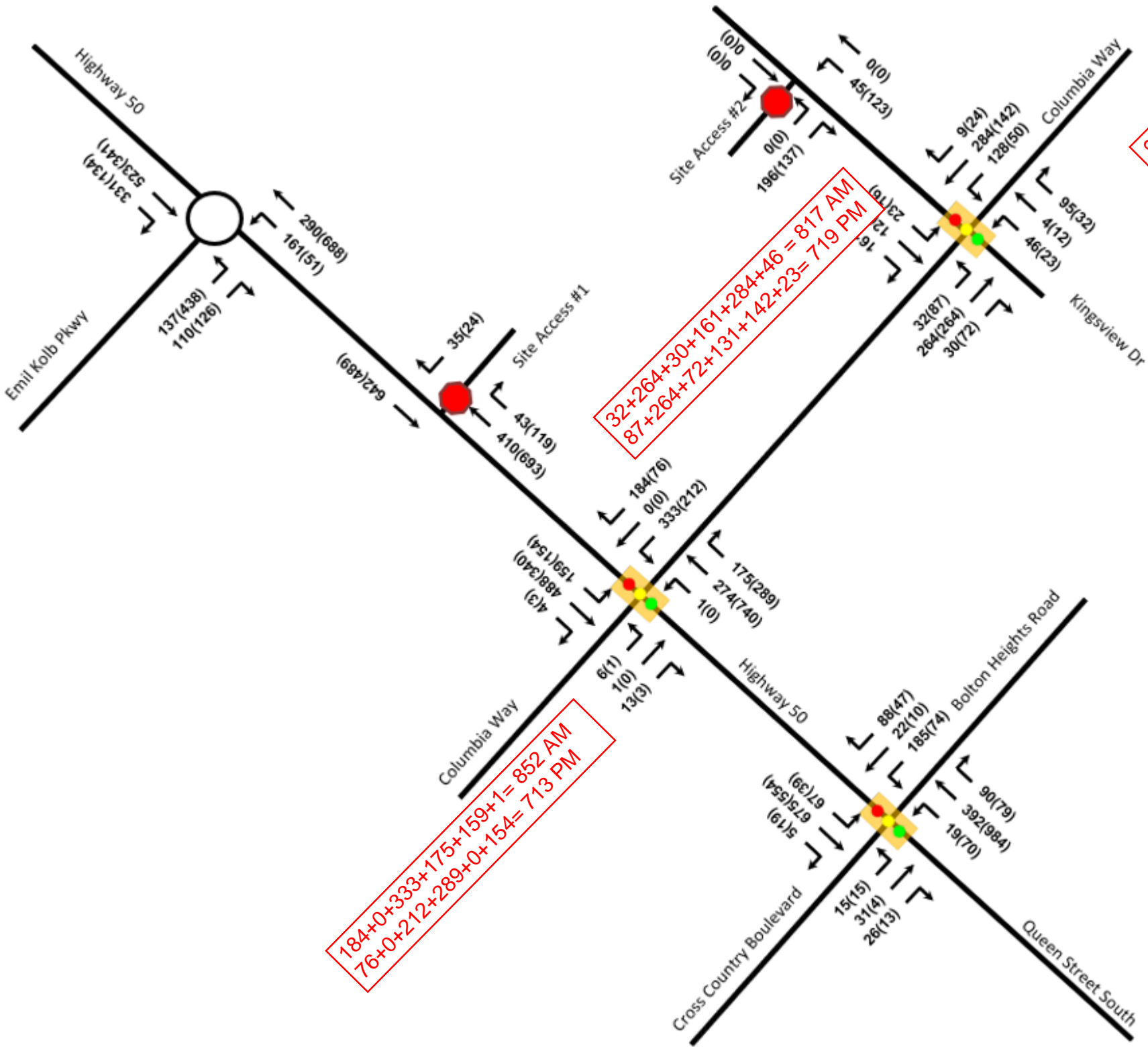
Can you please provide ultimate traffic data for Hwy 50, north of Columbia Way?

Thank you,

Greg Dennis, P.Eng.
Acoustical Engineer



30 Wertheim Court, Unit 25
Richmond Hill, Ontario
Canada L4B 1B9
Tel: 905-764-5223 ext. 236
Fax: 905-764-6813
greg@valcoustics.com



LEGEND
 ## AM Volume
 (##) PM Volume

Report-1.1		Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														
		Direction : North Road :														
		Dates : 1 5/7/2019														
Classes ----->		Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13	Total	
00:00	0:15		12	2											14	0.2%
0:15	0:30		5						2						7	0.1%
0:30	0:45		13												13	0.2%
0:45	1:00			1											1	0.0%
00:00	1:00		30	3					2						35	0.5%
1:00	1:15		7	1											8	0.1%
1:15	1:30		2	1											3	0.0%
1:30	1:45		4	1											5	0.1%
1:45	2:00		6												6	0.1%
1:00	2:00		19	3											22	0.3%
2:00	2:15		7	1											8	0.1%
2:15	2:30		3												3	0.0%
2:30	2:45		4												4	0.1%
2:45	3:00		3	2											5	0.1%
2:00	3:00		17	3											20	0.3%
3:00	3:15		2	1											3	0.0%
3:15	3:30		1	2											3	0.0%
3:30	3:45		1												1	0.0%
3:45	4:00		2												2	0.0%
3:00	4:00		6	3											9	0.1%
4:00	4:15		4												4	0.1%
4:15	4:30		5	1											6	0.1%
4:30	4:45		3	2											5	0.1%
4:45	5:00		6	1											7	0.1%
4:00	5:00		18	4											22	0.3%
5:00	5:15		4	1	1										6	0.1%
5:15	5:30	1	9	3		1									14	0.2%
5:30	5:45		13	3											16	0.2%
5:45	6:00		22	4		1									27	0.4%
5:00	6:00	1	48	11	1	2									63	1.0%
6:00	6:15		15	7											22	0.3%
6:15	6:30		25	3											28	0.4%
6:30	6:45		31	8	1	3									43	0.7%
6:45	7:00		47	11	2	2									62	0.9%
6:00	7:00		118	29	3	5									155	2.4%
7:00	7:15		44	11	1	2									58	0.9%
7:15	7:30		57	15											72	1.1%
7:30	7:45		71	8	2	1									82	1.3%
7:45	8:00	1	66	15	4	1	1		2						90	1.4%
7:00	8:00	1	238	49	7	4	1		2						302	4.6%
8:00	8:15		71	13	2	1									87	1.3%
8:15	8:30		59	14	7	3	1								84	1.3%
8:30	8:45		77	20	3	4			1						105	1.6%
8:45	9:00		69	8	3	2									82	1.3%
8:00	9:00		276	55	15	10	1		1						358	5.5%
9:00	9:15		45	12	1	2									60	0.9%
9:15	9:30		44	7											51	0.8%
9:30	9:45	1	52	14		2				1					70	1.1%
9:45	10:00		60	16	1	2	1								80	1.2%
9:00	10:00	1	201	49	2	6	1			1					261	4.0%
10:00	10:15		41	17	1	4									63	1.0%
10:15	10:30		45	14		2	1								62	0.9%
10:30	10:45		43	13		2	2								60	0.9%
10:45	11:00		57	10	1	2									70	1.1%
10:00	11:00		186	54	2	10	3								255	3.9%
11:00	11:15		36	13	2	3			4						58	0.9%
11:15	11:30	1	55	14	1	3				1					75	1.1%
11:30	11:45	1	59	9	1	4	1		2						77	1.2%
11:45	12:00	1	74	12	1		1								89	1.4%
11:00	12:00	3	224	48	5	10	2		6	1					299	4.6%

12:00	12:15	58	22	2	3					85	1.3%
12:15	12:30	70	11	1	4					86	1.3%
12:30	12:45	73	14	1	3					91	1.4%
12:45	13:00	69	13	1	3					86	1.3%
12:00	13:00	270	60	5	13					348	5.3%
13:00	13:15	79	16	1	6	1			1	104	1.6%
13:15	13:30	61	15	2	1					79	1.2%
13:30	13:45	89	14	2				1		106	1.6%
13:45	14:00	81	20	1	1	1				104	1.6%
13:00	14:00	310	65	6	8	2		1	1	393	6.0%
14:00	14:15	62	14	2	3					81	1.2%
14:15	14:30	1	87	14	4				1	107	1.6%
14:30	14:45		96	18	1	2	1			118	1.8%
14:45	15:00	1	85	29		2			2	119	1.8%
14:00	15:00	2	330	75	7	7	1		3	425	6.5%
15:00	15:15		87	22	2	5	2			118	1.8%
15:15	15:30	3	115	29	11	1	1			160	2.4%
15:30	15:45	1	133	33	1	1				169	2.6%
15:45	16:00		121	23	1	3				148	2.3%
15:00	16:00	4	456	107	15	10	3			595	9.1%
16:00	16:15		114	25	2	3			1	145	2.2%
16:15	16:30		124	26	2	3				155	2.4%
16:30	16:45		121	26		2				149	2.3%
16:45	17:00	1	117	29		1	1		1	150	2.3%
16:00	17:00	1	476	106	4	9	1		1	599	9.2%
17:00	17:15	1	139	38	1	1	2			182	2.8%
17:15	17:30		112	20		1			1	134	2.1%
17:30	17:45		110	35	1		1			147	2.3%
17:45	18:00		114	15		3			1	133	2.0%
17:00	18:00	1	475	108	2	5	3		2	596	9.1%
18:00	18:15		99	22	1					122	1.9%
18:15	18:30	1	140	25		3				169	2.6%
18:30	18:45		93	17		1				111	1.7%
18:45	19:00		94	28	1	1				124	1.9%
18:00	19:00	1	426	92	2	5				526	8.1%
19:00	19:15		91	16		2			1	110	1.7%
19:15	19:30	1	92	15		1			1	110	1.7%
19:30	19:45		92	23		1				116	1.8%
19:45	20:00		94	15		2				111	1.7%
19:00	20:00	1	369	69		6			2	447	6.8%
20:00	20:15	1	75	11						87	1.3%
20:15	20:30		76	10						86	1.3%
20:30	20:45		72	13	2					87	1.3%
20:45	21:00		71	14		1				86	1.3%
20:00	21:00	1	294	48	2	1				346	5.3%
21:00	21:15		52	8		2				62	0.9%
21:15	21:30		53	6		1			1	62	0.9%
21:30	21:45	1	40	6						47	0.7%
21:45	22:00		46	8						54	0.8%
21:00	22:00	1	191	28		3			1	225	3.4%
22:00	22:15		37	6		1				44	0.7%
22:15	22:30		40	3		2				45	0.7%
22:30	22:45		17	3						20	0.3%
22:45	23:00		26	4						30	0.5%
22:00	23:00		120	16		3				139	2.1%
23:00	23:15		17	2						19	0.3%
23:15	23:30		30	4						34	0.5%
23:30	23:45		20	4		1				25	0.4%
23:45	00:00		10	3						13	0.2%
23:00	00:00		77	13		1				91	1.4%
Total		18	5175	1098	78	118	18		21	5	6531
		0.3%	79.2%	16.8%	1.2%	1.8%	0.3%		0.3%	0.1%	
AM PEAK		1	77	20	7	4	2		4	1	105
period		5:15	8:30	8:30	8:15	8:30	10:30		11:00	9:30	8:30
% of class		5.6%	1.5%	1.8%	9.0%	3.4%	11.1%		19.0%	20.0%	1.6%
PM PEAK		3	140	38	11	6	2		2	1	182
period		15:15	18:15	17:00	15:15	13:00	15:00		14:45	13:00	17:00
% of class		16.7%	2.7%	3.5%	14.1%	5.1%	11.1%		9.5%	20.0%	2.8%

Report-1.2 Classes ----->	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway													Total	
	Direction : North Road :														
Dates : 1 5/8/2019															
	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13		
00:00 0:15		13	1											14	0.2%
0:15 0:30		9												9	0.1%
0:30 0:45		11												11	0.2%
0:45 1:00		9												9	0.1%
00:00 1:00		42	1											43	0.6%
1:00 1:15		8												8	0.1%
1:15 1:30		6	1											7	0.1%
1:30 1:45		5												5	0.1%
1:45 2:00		5			1			1						7	0.1%
1:00 2:00		24	1		1			1						27	0.4%
2:00 2:15		4	1											5	0.1%
2:15 2:30		1	1											2	0.0%
2:30 2:45		5												5	0.1%
2:45 3:00		3												3	0.0%
2:00 3:00		13	2											15	0.2%
3:00 3:15	1	1	2	1										5	0.1%
3:15 3:30		2	1											3	0.0%
3:30 3:45			2											2	0.0%
3:45 4:00		4			1									5	0.1%
3:00 4:00	1	7	5	1	1									15	0.2%
4:00 4:15		1							1					2	0.0%
4:15 4:30		2												2	0.0%
4:30 4:45		5												5	0.1%
4:45 5:00		6	1											7	0.1%
4:00 5:00		14	1						1					16	0.2%
5:00 5:15		6	1											7	0.1%
5:15 5:30	1	8	2	1										12	0.2%
5:30 5:45		18	1		1									20	0.3%
5:45 6:00		24	4											28	0.4%
5:00 6:00	1	56	8	1	1									67	1.0%
6:00 6:15		17	5		2									24	0.4%
6:15 6:30		32	8		3									43	0.6%
6:30 6:45		39	9	1	2									51	0.8%
6:45 7:00		43	9	1	3									56	0.8%
6:00 7:00		131	31	2	10									174	2.6%
7:00 7:15		51	10	3	1	1								66	1.0%
7:15 7:30		47	15		1		1							64	1.0%
7:30 7:45		64	17		3			2						86	1.3%
7:45 8:00		75	12	4	2	1								94	1.4%
7:00 8:00		237	54	7	7	2	1	2						310	4.7%
8:00 8:15		63	13	3	3	1								83	1.2%
8:15 8:30		83	17	4	2	1								107	1.6%
8:30 8:45		79	17	2	2									100	1.5%
8:45 9:00		73	15	4	1				1					94	1.4%
8:00 9:00		298	62	13	8	2			1					384	5.8%
9:00 9:15		56	17	2		1		1						77	1.2%
9:15 9:30	1	45	10		1	1								58	0.9%
9:30 9:45		47	12		1	2								62	0.9%
9:45 10:00		51	10		2	1		1						65	1.0%
9:00 10:00	1	199	49	2	4	5		2						262	3.9%
10:00 10:15		55	11		2			1						69	1.0%
10:15 10:30		51	16	2	1									70	1.1%
10:30 10:45	1	52	7	1	3									64	1.0%
10:45 11:00		56	11	2	3				1					73	1.1%
10:00 11:00	1	214	45	5	9			1	1					276	4.1%
11:00 11:15		54	17	1	1									73	1.1%
11:15 11:30		47	13											60	0.9%
11:30 11:45		58	14		2	1								75	1.1%
11:45 12:00		54	18	1	4				1					78	1.2%
11:00 12:00		213	62	2	7	1			1					286	4.3%

12:00	12:15	73	21									94	1.4%
12:15	12:30	62	18	1	4			1				86	1.3%
12:30	12:45	68	14	1	2			1				86	1.3%
12:45	13:00	61	15		1			2				79	1.2%
12:00	13:00	264	68	2	7			4				345	5.2%
13:00	13:15	71	25	1	1			1				99	1.5%
13:15	13:30	64	13		2			1				80	1.2%
13:30	13:45	62	13	1	1							77	1.2%
13:45	14:00	1	65	17	1	5			1	1		91	1.4%
13:00	14:00	1	262	68	3	9		2	1	1		347	5.2%
14:00	14:15	73	12	2	1							88	1.3%
14:15	14:30	99	19	5	2							125	1.9%
14:30	14:45	1	102	16	2							121	1.8%
14:45	15:00	1	84	25		4						114	1.7%
14:00	15:00	2	358	72	9	7						448	6.7%
15:00	15:15	111	26	2	3							142	2.1%
15:15	15:30	120	24	8	4			1				157	2.4%
15:30	15:45	2	114	27	1	3		2				149	2.2%
15:45	16:00	1	81	20	1	1						104	1.6%
15:00	16:00	3	426	97	12	11		3				552	8.3%
16:00	16:15	116	19	1				2				138	2.1%
16:15	16:30	125	28	1	4	1						159	2.4%
16:30	16:45	1	74	10		1						86	1.3%
16:45	17:00	149	44		2				1	1		197	3.0%
16:00	17:00	1	464	101	2	7	1	2	1	1		580	8.7%
17:00	17:15	1	124	38	3	2		1				169	2.5%
17:15	17:30	129	37		1			1				168	2.5%
17:30	17:45	129	24	2	2							157	2.4%
17:45	18:00	124	32		1			1				158	2.4%
17:00	18:00	1	506	131	5	6		3				652	9.8%
18:00	18:15	1	121	23								145	2.2%
18:15	18:30	1	110	20		4		1				136	2.0%
18:30	18:45	1	110	20		2						133	2.0%
18:45	19:00	1	98	16								115	1.7%
18:00	19:00	4	439	79		6		1				529	7.9%
19:00	19:15	89	17	1								107	1.6%
19:15	19:30	85	16		1							102	1.5%
19:30	19:45	85	17		4							106	1.6%
19:45	20:00	72	15		1			1				89	1.3%
19:00	20:00	331	65	1	6			1				404	6.1%
20:00	20:15	74	19		1							94	1.4%
20:15	20:30	2	69	14				1	1			87	1.3%
20:30	20:45	2	81	14	1							98	1.5%
20:45	21:00	60	14		3			1				78	1.2%
20:00	21:00	4	284	61	1	4		1	2			357	5.4%
21:00	21:15	59	8									67	1.0%
21:15	21:30	59	8		1							68	1.0%
21:30	21:45	62	12		1			1				76	1.1%
21:45	22:00	60	7		1							68	1.0%
21:00	22:00	240	35		3			1				279	4.2%
22:00	22:15	47	3		1							51	0.8%
22:15	22:30	34	5									39	0.6%
22:30	22:45	37	4									41	0.6%
22:45	23:00	44	10									54	0.8%
22:00	23:00	162	22		1							185	2.8%
23:00	23:15	26	3									29	0.4%
23:15	23:30	32	3									35	0.5%
23:30	23:45	28	4									32	0.5%
23:45	00:00	9										9	0.1%
23:00	00:00	95	10									105	1.6%
Total		20 0.3%	5279 79.3%	1130 17.0%	68 1.0%	115 1.7%	11 0.2%	3 0.0%	24 0.4%	6 0.1%	2 0.0%	6658	
AM PEAK		1	83	18	4	4	2	1	2	1		107	
period		3:00	8:15	11:45	7:45	11:45	9:30	7:15	7:30	4:00		8:15	
% of class		5.0%	1.6%	1.6%	5.9%	3.5%	18.2%	33.3%	8.3%	16.7%		1.6%	
PM PEAK		2	149	44	8	5	1	1	2	1	1	197	
period		15:30	16:45	16:45	15:15	13:45	16:15	18:15	12:45	13:45	13:45	16:45	
% of class		10.0%	2.8%	3.9%	11.8%	4.3%	9.1%	33.3%	8.3%	16.7%	50.0%	3.0%	

Report-1.3 Classes ----->	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway													Total	
	Direction : North Road :														
Dates : 1 5/9/2019															
	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13		
OO:00 0:15		13	2		1									16	0.2%
0:15 0:30		7	1											8	0.1%
0:30 0:45		4	2											6	0.1%
0:45 1:00		8												8	0.1%
OO:00 1:00		32	5		1									38	0.6%
1:00 1:15		6	2											8	0.1%
1:15 1:30		5	3											8	0.1%
1:30 1:45		7	1											8	0.1%
1:45 2:00		4												4	0.1%
1:00 2:00		22	6											28	0.4%
2:00 2:15		3	2											5	0.1%
2:15 2:30		4												4	0.1%
2:30 2:45		2												2	0.0%
2:45 3:00		4	1											5	0.1%
2:00 3:00		13	3											16	0.2%
3:00 3:15		2	1											3	0.0%
3:15 3:30		1	4											5	0.1%
3:30 3:45															
3:45 4:00		2												2	0.0%
3:00 4:00		5	5											10	0.2%
4:00 4:15		1												1	0.0%
4:15 4:30		3				1								4	0.1%
4:30 4:45		1	2		1									4	0.1%
4:45 5:00		8	3											11	0.2%
4:00 5:00		13	5		1	1								20	0.3%
5:00 5:15		9	3	1	2									15	0.2%
5:15 5:30	1	9	2											12	0.2%
5:30 5:45		15												15	0.2%
5:45 6:00		15	2		1									18	0.3%
5:00 6:00	1	48	7	1	3									60	0.9%
6:00 6:15		18	2											20	0.3%
6:15 6:30		27	6		2									35	0.5%
6:30 6:45		32	9	1	1									43	0.7%
6:45 7:00		39	7	2	1									49	0.8%
6:00 7:00		116	24	3	4									147	2.3%
7:00 7:15		48	15		2	1				1				67	1.0%
7:15 7:30		49	11											60	0.9%
7:30 7:45		71	18	2		1								92	1.4%
7:45 8:00		70	10	4	4									88	1.4%
7:00 8:00		238	54	6	6	2				1				307	4.8%
8:00 8:15		59	12	2	1									74	1.2%
8:15 8:30		77	14	7	2				1					101	1.6%
8:30 8:45		73	25	2	1	3								104	1.6%
8:45 9:00		59	12	1		2								74	1.2%
8:00 9:00		268	63	12	4	5		1						353	5.5%
9:00 9:15		45	16	2	2	2								67	1.0%
9:15 9:30		40	12	2	1									55	0.9%
9:30 9:45	1	51	15		2			1						70	1.1%
9:45 10:00	1	46	15	1	4									67	1.0%
9:00 10:00	2	182	58	5	9	2		1						259	4.0%
10:00 10:15		45	14		2	2		1		1				65	1.0%
10:15 10:30		46	10	1	3			1						61	1.0%
10:30 10:45		49	18		3	1		1						72	1.1%
10:45 11:00		51	12	1	2	1		2						69	1.1%
10:00 11:00		191	54	2	10	4		5		1				267	4.2%
11:00 11:15		49	14	2	3	1								69	1.1%
11:15 11:30		53	6	1	2	1	1							64	1.0%
11:30 11:45	1	74	8	2	2	1		1						89	1.4%
11:45 12:00		71	7		3									81	1.3%
11:00 12:00	1	247	35	5	10	3	1	1						303	4.7%

Report-1.4 Classes ----->	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														
	Direction : South Road :														
Dates : 1 5/7/2019															
	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13	Total	
00:00 0:15		6	1											7	0.1%
0:15 0:30														6	0.1%
0:30 0:45		6												4	0.1%
0:45 1:00		2	1						1					4	0.1%
00:00 1:00		14	2						1					17	0.3%
1:00 1:15		3												3	0.0%
1:15 1:30		1	1											2	0.0%
1:30 1:45		2	2											4	0.1%
1:45 2:00		3	1											4	0.1%
1:00 2:00		9	4											13	0.2%
2:00 2:15		2												2	0.0%
2:15 2:30		3	1											4	0.1%
2:30 2:45		2												2	0.0%
2:45 3:00		1												1	0.0%
2:00 3:00		8	1											9	0.1%
3:00 3:15		5	2											7	0.1%
3:15 3:30		4												4	0.1%
3:30 3:45		3	5											8	0.1%
3:45 4:00		2	2											4	0.1%
3:00 4:00		14	9											23	0.4%
4:00 4:15		9	2											11	0.2%
4:15 4:30		15	4											19	0.3%
4:30 4:45		20	9		1									30	0.5%
4:45 5:00		20	9											29	0.5%
4:00 5:00		64	24		1									89	1.5%
5:00 5:15		29	9											38	0.6%
5:15 5:30		37	16	1	1									55	0.9%
5:30 5:45		40	21		2									63	1.0%
5:45 6:00		71	34											105	1.7%
5:00 6:00		177	80	1	3									261	4.3%
6:00 6:15		60	31	1	2									94	1.5%
6:15 6:30		63	36											99	1.6%
6:30 6:45		83	39	2				1						125	2.0%
6:45 7:00		86	27		1									114	1.9%
6:00 7:00		292	133	3	3			1						432	7.1%
7:00 7:15		75	31		1									107	1.7%
7:15 7:30		87	25		1			1						114	1.9%
7:30 7:45	1	95	30	6	1	1		1						135	2.2%
7:45 8:00		119	24	2	2									147	2.4%
7:00 8:00	1	376	110	8	5	1		2						503	8.2%
8:00 8:15		135	19	3	2			1						160	2.6%
8:15 8:30		118	24	2	1	1								146	2.4%
8:30 8:45		96	16	1	1									114	1.9%
8:45 9:00	1	98	21		4									124	2.0%
8:00 9:00	1	447	80	6	8	1		1						544	8.9%
9:00 9:15	1	79	18	1										99	1.6%
9:15 9:30		100	13		2									115	1.9%
9:30 9:45		77	18	1	6									102	1.7%
9:45 10:00		71	14	1	1	2								89	1.5%
9:00 10:00	1	327	63	3	9	2								405	6.6%
10:00 10:15	1	88	11		3									103	1.7%
10:15 10:30		68	19		3	1		1						92	1.5%
10:30 10:45		73	16	1	2			1						93	1.5%
10:45 11:00		65	22		1									88	1.4%
10:00 11:00	1	294	68	1	9	1		2						376	6.1%
11:00 11:15		50	12		2									64	1.0%
11:15 11:30		69	12	2	2									85	1.4%
11:30 11:45		53	15	3	3									74	1.2%
11:45 12:00		67	9		2			1						79	1.3%
11:00 12:00		239	48	5	9			1						302	4.9%

Report-1.5	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														
	Direction : South Road :														
Dates : 1 5/8/2019															
Classes ----->	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13	Total	
00:00 0:15		5	1											6	0.1%
0:15 0:30		5												5	0.1%
0:30 0:45		5	1		2									8	0.1%
0:45 1:00		4												4	0.1%
00:00 1:00		19	2		2									23	0.4%
1:00 1:15		2												2	0.0%
1:15 1:30		5												5	0.1%
1:30 1:45		1												1	0.0%
1:45 2:00		1	1					1						3	0.0%
1:00 2:00		9	1					1						11	0.2%
2:00 2:15			1											1	0.0%
2:15 2:30		1			1									2	0.0%
2:30 2:45		1	1											2	0.0%
2:45 3:00		3	1											4	0.1%
2:00 3:00		5	3		1									9	0.1%
3:00 3:15		2	2											4	0.1%
3:15 3:30		2	2											4	0.1%
3:30 3:45		2	2											4	0.1%
3:45 4:00		2	3											5	0.1%
3:00 4:00		8	9											17	0.3%
4:00 4:15		8	5											13	0.2%
4:15 4:30		16	5											21	0.3%
4:30 4:45		19	7											26	0.4%
4:45 5:00		16	13											29	0.5%
4:00 5:00		59	30											89	1.4%
5:00 5:15		27	9											36	0.6%
5:15 5:30		20	23		1			1						45	0.7%
5:30 5:45		49	21	1	1									72	1.1%
5:45 6:00		58	26	1	4									89	1.4%
5:00 6:00		154	79	2	6			1						242	3.8%
6:00 6:15		59	35		1									95	1.5%
6:15 6:30		83	20											103	1.6%
6:30 6:45		73	32	1										106	1.7%
6:45 7:00		88	21	1	2									112	1.8%
6:00 7:00		303	108	2	3									416	6.5%
7:00 7:15		69	25		2									96	1.5%
7:15 7:30		72	28		4			1						105	1.6%
7:30 7:45	1	98	29	7	3									138	2.2%
7:45 8:00		132	23	3	3			1						162	2.5%
7:00 8:00	1	371	105	10	12			2						501	7.9%
8:00 8:15		122	33	3	3									161	2.5%
8:15 8:30		107	18	3	3	2								133	2.1%
8:30 8:45		113	16	1	6			1						137	2.2%
8:45 9:00		87	17	2				1						107	1.7%
8:00 9:00		429	84	9	12	2		2						538	8.4%
9:00 9:15		86	18	2	4				1					111	1.7%
9:15 9:30		74	18	1	2									95	1.5%
9:30 9:45	1	71	17		1	1								91	1.4%
9:45 10:00	1	90	12	1	2	1								107	1.7%
9:00 10:00	2	321	65	4	9	2			1					404	6.3%
10:00 10:15	1	69	19		2		1			1				93	1.5%
10:15 10:30		60	15		1				1					77	1.2%
10:30 10:45		60	12		2			2						76	1.2%
10:45 11:00		60	8	1	2	1	1							73	1.1%
10:00 11:00	1	249	54	1	7	1	2	2	1	1				319	5.0%
11:00 11:15	1	53	18	1	2									75	1.2%
11:15 11:30	1	67	16	1	1									86	1.4%
11:30 11:45		52	13		4	2								71	1.1%
11:45 12:00		60	14		5		1	1						81	1.3%
11:00 12:00	2	232	61	2	12	2	1	1						313	4.9%

Report-1.6	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														
	Direction : South Road :														
Dates : 1 5/9/2019															
Classes ----->	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13	Total	
00:00 0:15		4	2		1									7	0.1%
0:15 0:30		4			1									5	0.1%
0:30 0:45		4												4	0.1%
0:45 1:00		3												3	0.1%
00:00 1:00		15	2		2									19	0.3%
1:00 1:15		4												4	0.1%
1:15 1:30		2	2											4	0.1%
1:30 1:45		2	2		1									5	0.1%
1:45 2:00		3												3	0.1%
1:00 2:00		11	4		1									16	0.3%
2:00 2:15		2	1											3	0.1%
2:15 2:30		1												1	0.0%
2:30 2:45		3												3	0.1%
2:45 3:00															
2:00 3:00		6	1											7	0.1%
3:00 3:15		2	1											3	0.1%
3:15 3:30		4	2											6	0.1%
3:30 3:45		4	3											7	0.1%
3:45 4:00		4	2											6	0.1%
3:00 4:00		14	8											22	0.4%
4:00 4:15		6	3											9	0.2%
4:15 4:30		11	5											16	0.3%
4:30 4:45		14	6											20	0.3%
4:45 5:00		26	6											32	0.5%
4:00 5:00		57	20											77	1.3%
5:00 5:15		29	10		1									40	0.7%
5:15 5:30		27	20	1		1								49	0.8%
5:30 5:45		39	18											57	1.0%
5:45 6:00		58	20		2									80	1.4%
5:00 6:00		153	68	1	3	1								226	3.9%
6:00 6:15		68	35	1	1									105	1.8%
6:15 6:30		75	31	1	2			1						110	1.9%
6:30 6:45		71	28	1	2									102	1.7%
6:45 7:00		101	27		2									130	2.2%
6:00 7:00		315	121	3	7			1						447	7.7%
7:00 7:15		69	25		4	1				1				100	1.7%
7:15 7:30		99	28		1			1						129	2.2%
7:30 7:45	1	84	23	7	4	1								120	2.1%
7:45 8:00		129	22	3	2									156	2.7%
7:00 8:00	1	381	98	10	11	2		1		1				505	8.6%
8:00 8:15		126	26	4	1									157	2.7%
8:15 8:30		111	23	1	3	2								140	2.4%
8:30 8:45		91	20	3	1	1								116	2.0%
8:45 9:00		79	13		2									94	1.6%
8:00 9:00		407	82	8	7	3								507	8.7%
9:00 9:15		79	18	2	2			1						102	1.7%
9:15 9:30		76	20	2	2									100	1.7%
9:30 9:45		65	21	1	2			1						90	1.5%
9:45 10:00	1	81	19	1	4									106	1.8%
9:00 10:00	1	301	78	6	10			2						398	6.8%
10:00 10:15		63	13	2	4	1		1						84	1.4%
10:15 10:30		78	9		3	1		1						92	1.6%
10:30 10:45		58	6		2									66	1.1%
10:45 11:00		69	7		2	1								79	1.4%
10:00 11:00		268	35	2	11	3		2						321	5.5%
11:00 11:15		67	15		2									84	1.4%
11:15 11:30		58	14	2	1			2						77	1.3%
11:30 11:45		57	10	1	3					1				72	1.2%
11:45 12:00		64	13			1								78	1.3%
11:00 12:00		246	52	3	6	1		2		1				311	5.3%

Report-1.7	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														
	Direction : North + South Road :														
Dates : 1 5/7/2019															
Classes ----->	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12	Class-13	Total	
00:00 0:15		18	3											21	0.2%
0:15 0:30		5						2						7	0.1%
0:30 0:45		19												19	0.2%
0:45 1:00		2	2						1					5	0.0%
00:00 1:00		44	5					2	1					52	0.4%
1:00 1:15		10	1											11	0.1%
1:15 1:30		3	2											5	0.0%
1:30 1:45		6	3											9	0.1%
1:45 2:00		9	1											10	0.1%
1:00 2:00		28	7											35	0.3%
2:00 2:15		9	1											10	0.1%
2:15 2:30		6	1											7	0.1%
2:30 2:45		6												6	0.0%
2:45 3:00		4	2											6	0.0%
2:00 3:00		25	4											29	0.2%
3:00 3:15		7	3											10	0.1%
3:15 3:30		5	2											7	0.1%
3:30 3:45		4	5											9	0.1%
3:45 4:00		4	2											6	0.0%
3:00 4:00		20	12											32	0.3%
4:00 4:15		13	2											15	0.1%
4:15 4:30		20	5											25	0.2%
4:30 4:45		23	11		1									35	0.3%
4:45 5:00		26	10											36	0.3%
4:00 5:00		82	28		1									111	0.9%
5:00 5:15		33	10	1										44	0.3%
5:15 5:30	1	46	19	1	2									69	0.5%
5:30 5:45		53	24		2									79	0.6%
5:45 6:00		93	38		1									132	1.0%
5:00 6:00	1	225	91	2	5									324	2.6%
6:00 6:15		75	38	1	2									116	0.9%
6:15 6:30		88	39											127	1.0%
6:30 6:45		114	47	3	3			1						168	1.3%
6:45 7:00		133	38	2	3									176	1.4%
6:00 7:00		410	162	6	8			1						587	4.6%
7:00 7:15		119	42	1	3									165	1.3%
7:15 7:30		144	40		1			1						186	1.5%
7:30 7:45	1	166	38	8	2	1		1						217	1.7%
7:45 8:00	1	185	39	6	3	1		2						237	1.9%
7:00 8:00	2	614	159	15	9	2		4						805	6.4%
8:00 8:15		206	32	5	3			1						247	2.0%
8:15 8:30		177	38	9	4	2								230	1.8%
8:30 8:45		173	36	4	5			1						219	1.7%
8:45 9:00	1	167	29	3	6									206	1.6%
8:00 9:00	1	723	135	21	18	2		2						902	7.1%
9:00 9:15	1	124	30	2	2									159	1.3%
9:15 9:30		144	20		2									166	1.3%
9:30 9:45	1	129	32	1	8				1					172	1.4%
9:45 10:00		131	30	2	3	3								169	1.3%
9:00 10:00	2	528	112	5	15	3			1					666	5.3%
10:00 10:15	1	129	28	1	7									166	1.3%
10:15 10:30		113	33		5	2		1						154	1.2%
10:30 10:45		116	29	1	4	2		1						153	1.2%
10:45 11:00		122	32	1	3									158	1.2%
10:00 11:00	1	480	122	3	19	4		2						631	5.0%
11:00 11:15		86	25	2	5			4						122	1.0%
11:15 11:30	1	124	26	3	5				1					160	1.3%
11:30 11:45	1	112	24	4	7	1		2						151	1.2%
11:45 12:00	1	141	21	1	2	1		1						168	1.3%
11:00 12:00	3	463	96	10	19	2		7	1					601	4.8%

Report-1.8	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway													Total	
	Direction : North + South Road :														
Dates : 1 5/8/2019													Total		
Classes ----->	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12			Class-13
00:00 0:15		18	2											20	0.2%
0:15 0:30		14												14	0.1%
0:30 0:45		16	1		2									19	0.1%
0:45 1:00		13												13	0.1%
00:00 1:00		61	3		2									66	0.5%
1:00 1:15		10												10	0.1%
1:15 1:30		11	1											12	0.1%
1:30 1:45		6												6	0.0%
1:45 2:00		6	1		1			2						10	0.1%
1:00 2:00		33	2		1			2						38	0.3%
2:00 2:15		4	2											6	0.0%
2:15 2:30		2	1		1									4	0.0%
2:30 2:45		6	1											7	0.1%
2:45 3:00		6	1											7	0.1%
2:00 3:00		18	5		1									24	0.2%
3:00 3:15	1	3	4	1										9	0.1%
3:15 3:30		4	3											7	0.1%
3:30 3:45		2	4											6	0.0%
3:45 4:00		6	3		1									10	0.1%
3:00 4:00	1	15	14	1	1									32	0.2%
4:00 4:15		9	5						1					15	0.1%
4:15 4:30		18	5											23	0.2%
4:30 4:45		24	7											31	0.2%
4:45 5:00		22	14											36	0.3%
4:00 5:00		73	31						1					105	0.8%
5:00 5:15		33	10											43	0.3%
5:15 5:30	1	28	25	1	1			1						57	0.4%
5:30 5:45		67	22	1	2									92	0.7%
5:45 6:00		82	30	1	4									117	0.9%
5:00 6:00	1	210	87	3	7			1						309	2.4%
6:00 6:15		76	40		3									119	0.9%
6:15 6:30		115	28		3									146	1.1%
6:30 6:45		112	41	2	2									157	1.2%
6:45 7:00		131	30	2	5									168	1.3%
6:00 7:00		434	139	4	13									590	4.5%
7:00 7:15		120	35	3	3	1								162	1.2%
7:15 7:30		119	43		5		1	1						169	1.3%
7:30 7:45	1	162	46	7	6			2						224	1.7%
7:45 8:00		207	35	7	5	1		1						256	2.0%
7:00 8:00	1	608	159	17	19	2	1	4						811	6.2%
8:00 8:15		185	46	6	6	1								244	1.9%
8:15 8:30		190	35	7	5	3								240	1.8%
8:30 8:45		192	33	3	8			1						237	1.8%
8:45 9:00		160	32	6	1			1	1					201	1.5%
8:00 9:00		727	146	22	20	4		2	1					922	7.1%
9:00 9:15		142	35	4	4	1		1	1					188	1.4%
9:15 9:30	1	119	28	1	3	1								153	1.2%
9:30 9:45	1	118	29		2	3								153	1.2%
9:45 10:00	1	141	22	1	4	2		1						172	1.3%
9:00 10:00	3	520	114	6	13	7		2	1					666	5.1%
10:00 10:15	1	124	30		4		1	1		1				162	1.2%
10:15 10:30		111	31	2	2					1				147	1.1%
10:30 10:45	1	112	19	1	5			2						140	1.1%
10:45 11:00		116	19	3	5	1	1		1					146	1.1%
10:00 11:00	2	463	99	6	16	1	2	3	2	1				595	4.6%
11:00 11:15	1	107	35	2	3									148	1.1%
11:15 11:30	1	114	29	1	1									146	1.1%
11:30 11:45		110	27		6	3								146	1.1%
11:45 12:00		114	32	1	9		1	1	1					159	1.2%
11:00 12:00	2	445	123	4	19	3	1	1	1					599	4.6%

Report-1.9	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway													Total	
	Direction : North + South Road :														
Dates : 1 5/9/2019													Total		
Classes ----->	Class-1	Class-2	Class-3	Class-4	Class-5	Class-6	Class-7	Class-8	Class-9	Class-10	Class-11	Class-12			Class-13
00:00 0:15		17	4		2									23	0.2%
0:15 0:30		11	1		1									13	0.1%
0:30 0:45		8	2											10	0.1%
0:45 1:00		11												11	0.1%
00:00 1:00		47	7		3									57	0.5%
1:00 1:15		10	2											12	0.1%
1:15 1:30		7	5											12	0.1%
1:30 1:45		9	3		1									13	0.1%
1:45 2:00		7												7	0.1%
1:00 2:00		33	10		1									44	0.4%
2:00 2:15		5	3											8	0.1%
2:15 2:30		5												5	0.0%
2:30 2:45		5												5	0.0%
2:45 3:00		4	1											5	0.0%
2:00 3:00		19	4											23	0.2%
3:00 3:15		4	2											6	0.0%
3:15 3:30		5	6											11	0.1%
3:30 3:45		4	3											7	0.1%
3:45 4:00		6	2											8	0.1%
3:00 4:00		19	13											32	0.3%
4:00 4:15		7	3											10	0.1%
4:15 4:30		14	5			1								20	0.2%
4:30 4:45		15	8		1									24	0.2%
4:45 5:00		34	9											43	0.4%
4:00 5:00		70	25		1	1								97	0.8%
5:00 5:15		38	13	1	3									55	0.4%
5:15 5:30	1	36	22	1		1								61	0.5%
5:30 5:45		54	18											72	0.6%
5:45 6:00		73	22		3									98	0.8%
5:00 6:00	1	201	75	2	6	1								286	2.3%
6:00 6:15		86	37	1	1									125	1.0%
6:15 6:30		102	37	1	4			1						145	1.2%
6:30 6:45		103	37	2	3									145	1.2%
6:45 7:00		140	34	2	3									179	1.5%
6:00 7:00		431	145	6	11			1						594	4.8%
7:00 7:15		117	40		6	2				2				167	1.4%
7:15 7:30		148	39		1			1						189	1.5%
7:30 7:45	1	155	41	9	4	2								212	1.7%
7:45 8:00		199	32	7	6									244	2.0%
7:00 8:00	1	619	152	16	17	4		1		2				812	6.6%
8:00 8:15		185	38	6	2									231	1.9%
8:15 8:30		188	37	8	5	2		1						241	2.0%
8:30 8:45		164	45	5	2	4								220	1.8%
8:45 9:00		138	25	1	2	2								168	1.4%
8:00 9:00		675	145	20	11	8		1						860	7.0%
9:00 9:15		124	34	4	4	2		1						169	1.4%
9:15 9:30		116	32	4	3									155	1.3%
9:30 9:45	1	116	36	1	4			2						160	1.3%
9:45 10:00	2	127	34	2	8									173	1.4%
9:00 10:00	3	483	136	11	19	2		3						657	5.4%
10:00 10:15		108	27	2	6	3		2		1				149	1.2%
10:15 10:30		124	19	1	6	1		2						153	1.2%
10:30 10:45		107	24		5	1		1						138	1.1%
10:45 11:00		120	19	1	4	2		2						148	1.2%
10:00 11:00		459	89	4	21	7		7		1				588	4.8%
11:00 11:15		116	29	2	5	1								153	1.2%
11:15 11:30		111	20	3	3	1	1	2						141	1.2%
11:30 11:45	1	131	18	3	5	1		1		1				161	1.3%
11:45 12:00		135	20		3	1								159	1.3%
11:00 12:00	1	493	87	8	16	4	1	3		1				614	5.0%

Report-2.1	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Pace	Number	
	Direction : North Road :																
Speeds,km/h ----->	Dates : 5/7/2019														Total	Speed	in Pace
	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15				7	6	1								14	62.6-77.6	12	
0:15 0:30			1	3	2	1								7	60.4-75.4	5	
0:30 0:45			1	5	7									13	63.9-78.9	12	
0:45 1:00					1									1	59.5-74.5	1	
00:00 1:00			2	15	16	2								35	62.6-77.6	12	
1:00 1:15				1	6	1								8	68.3-83.3	8	
1:15 1:30			1	1	1									3	57.8-72.8	3	
1:30 1:45			1	3	1									5	53.5-68.5	4	
1:45 2:00					4	2								6	70.3-85.3	6	
1:00 2:00			2	5	12	3								22	68.3-83.3	8	
2:00 2:15				2	4	2								8	62.1-77.1	6	
2:15 2:30				1	1	1								3	63.3-78.3	2	
2:30 2:45				1	3									4	63.6-78.6	4	
2:45 3:00				3	2									5	56.1-71.1	4	
2:00 3:00				7	10	3								20	62.1-77.1	6	
3:00 3:15				3										3	55.1-70.1	3	
3:15 3:30					1	1	1							3	69.0-84.0	2	
3:30 3:45					1									1	62.3-77.3	1	
3:45 4:00				1		1								2	52.5-67.5	1	
3:00 4:00				4	2	2	1							9	55.1-70.1	3	
4:00 4:15				2	1	1								4	57.4-72.4	3	
4:15 4:30			1		3	2								6	70.6-85.6	5	
4:30 4:45				1	4									5	62.8-77.8	5	
4:45 5:00			1	4	2									7	50.2-65.2	5	
4:00 5:00			2	7	10	3								22	70.6-85.6	5	
5:00 5:15				3	2	1								6	59.7-74.7	5	
5:15 5:30			1	3	2	6	2							14	74.9-89.9	8	
5:30 5:45			4	6	4	1	1							16	54.8-69.8	10	
5:45 6:00			1	8	16	2								27	66.5-81.5	23	
5:00 6:00			6	20	24	10	3							63	66.5-81.5	23	
6:00 6:15			2	4	11	5								22	67.4-82.4	14	
6:15 6:30				14	11	2	1							28	61.0-76.0	22	
6:30 6:45			2	19	19	3								43	65.4-80.4	35	
6:45 7:00			10	26	20	5	1							62	63.7-78.7	42	
6:00 7:00			14	63	61	15	2							155	63.7-78.7	42	
7:00 7:15			5	17	27	8	1							58	64.6-79.6	39	
7:15 7:30			3	24	34	10	1							72	64.9-79.9	51	
7:30 7:45			2	44	24	11	1							82	62.1-77.1	64	
7:45 8:00			15	38	31	6								90	61.7-76.7	60	
7:00 8:00			25	123	116	35	3							302	62.1-77.1	64	
8:00 8:15			5	39	34	8	1							87	64.2-79.2	68	
8:15 8:30			14	29	35	5	1							84	64.2-79.2	59	
8:30 8:45			20	61	22	2								105	59.1-74.1	80	
8:45 9:00		1	9	49	22	1								82	59.9-74.9	65	
8:00 9:00		1	48	178	113	16	2							358	59.1-74.1	80	
9:00 9:15			4	36	15	4	1							60	62.1-77.1	46	
9:15 9:30			1	28	16	6								51	61.8-76.8	41	
9:30 9:45	1	2	7	32	20	8								70	62.9-77.9	49	
9:45 10:00			2	43	29	6								80	61.2-76.2	61	
9:00 10:00	1	2	14	139	80	24	1							261	61.2-76.2	61	
10:00 10:15			7	20	29	5	2							63	63.9-78.9	45	
10:15 10:30			6	21	32	3								62	62.5-77.5	51	
10:30 10:45			4	23	26	6	1							60	62.2-77.2	41	
10:45 11:00			1	24	34	10	1							70	61.8-76.8	47	
10:00 11:00			18	88	121	24	4							255	62.5-77.5	51	
11:00 11:15			2	26	24	5		1						58	63.7-78.7	47	
11:15 11:30	2		6	33	31	3								75	62.4-77.4	56	
11:30 11:45		1	10	29	29	7	1							77	64.2-79.2	49	
11:45 12:00			6	39	35	8	1							89	65.2-80.2	62	
11:00 12:00	2	1	24	127	119	23	2	1						299	65.2-80.2	62	

Report-2.2	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : North Road :																
	Dates : 5/8/2019																
Speeds,km/h ----->	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15				4	5	4	1								14	69.2-84.2	9
0:15 0:30				5	2	1		1							9	61.1-76.1	7
0:30 0:45			2	3	4	2									11	66.8-81.8	8
0:45 1:00				2	3	3	1								9	72.3-87.3	6
00:00 1:00			2	14	14	10	2	1							43	69.2-84.2	9
1:00 1:15				2	6										8	63.6-78.6	7
1:15 1:30				2	2	1	2								7	61.4-76.4	4
1:30 1:45			1	3	1										5	55.1-70.1	4
1:45 2:00			1	3	2	1									7	56.6-71.6	5
1:00 2:00			2	10	11	2	2								27	63.6-78.6	7
2:00 2:15				1	2		2								5	64.6-79.6	3
2:15 2:30			1	1											2	55.0-70.0	2
2:30 2:45				1	3	1									5	63.3-78.3	4
2:45 3:00					2		1								3	64.5-79.5	2
2:00 3:00			1	3	7	1	3								15	63.3-78.3	4
3:00 3:15				1	2	2									5	72.7-87.7	4
3:15 3:30				1	1		1								3	62.4-77.4	2
3:30 3:45				1	1										2	59.1-74.1	2
3:45 4:00				1	3		1								5	57.8-72.8	4
3:00 4:00				4	7	2	2								15	72.7-87.7	4
4:00 4:15				2											2	54.8-69.8	2
4:15 4:30				1	1										2	59.6-74.6	2
4:30 4:45					2	3									5	69.2-84.2	5
4:45 5:00			1	2	3	1									7	60.7-75.7	4
4:00 5:00			1	5	6	4									16	69.2-84.2	5
5:00 5:15				3	3	1									7	62.2-77.2	6
5:15 5:30				5	3	4									12	62.4-77.4	8
5:30 5:45			1	7	9	3									20	65.9-80.9	16
5:45 6:00				6	15	6	1								28	62.0-77.0	19
5:00 6:00			1	21	30	14	1								67	62.0-77.0	19
6:00 6:15			1	12	6	2	3								24	62.8-77.8	17
6:15 6:30				13	25	4	1								43	64.1-79.1	36
6:30 6:45			2	15	19	11	3	1							51	68.1-83.1	33
6:45 7:00			3	14	31	6	2								56	63.4-78.4	44
6:00 7:00			6	54	81	23	7	3							174	63.4-78.4	44
7:00 7:15			2	23	35	6									66	65.8-80.8	51
7:15 7:30				27	28	9									64	61.2-76.2	53
7:30 7:45			1	23	56	6									86	66.7-81.7	73
7:45 8:00			2	41	42	8	1								94	62.7-77.7	69
7:00 8:00			5	114	161	29	1								310	66.7-81.7	73
8:00 8:15			4	37	33	9									83	63.5-78.5	62
8:15 8:30			10	41	50	4	2								107	63.4-78.4	80
8:30 8:45			7	49	38	6									100	60.3-75.3	73
8:45 9:00			8	38	38	7	3								94	64.1-79.1	70
8:00 9:00			29	165	159	26	5								384	63.4-78.4	80
9:00 9:15			4	37	32	3	1								77	64.3-79.3	60
9:15 9:30	4		5	20	21	6	2								58	64.0-79.0	35
9:30 9:45			2	24	30	6									62	66.2-81.2	49
9:45 10:00			1	25	33	6									65	63.7-78.7	54
9:00 10:00	4		12	106	116	21	3								262	64.3-79.3	60
10:00 10:15			4	30	27	7	1								69	61.6-76.6	51
10:15 10:30			3	21	43	3									70	65.0-80.0	59
10:30 10:45			1	24	32	7									64	63.2-78.2	52
10:45 11:00			6	35	22	10									73	61.6-76.6	51
10:00 11:00			14	110	124	27	1								276	65.0-80.0	59
11:00 11:15				5	34	26	7	1							73	62.4-77.4	56
11:15 11:30				2	19	34	4	1							60	63.7-78.7	53
11:30 11:45		1	7	38	23	6									75	63.0-78.0	56
11:45 12:00			1	26	37	14									78	63.0-78.0	54
11:00 12:00		1	15	117	120	31	2								286	62.4-77.4	56

Report-2.3	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway																	
	Direction : North															Road :		
	Dates : 5/9/2019																	
Speeds,km/h ----->	41	51	61	71	81	91	101	111	121	131	141	151	160	Total	Pace Speed	Number in Pace		
00:00 0:15				10	4	2								16	59.8-74.8	12		
0:15 0:30			1	1	3	2	1							8	71.8-86.8	5		
0:30 0:45				1	5									6	63.0-78.0	6		
0:45 1:00				5	2		1							8	57.5-72.5	6		
00:00 1:00			1	17	14	4	2							38	59.8-74.8	12		
1:00 1:15				2	3	3								8	68.7-83.7	7		
1:15 1:30				2	4	2								8	69.9-84.9	7		
1:30 1:45		1	1	5			1							8	53.5-68.5	6		
1:45 2:00				2		2								4	53.5-68.5	2		
1:00 2:00		1	1	11	7	7	1							28	68.7-83.7	7		
2:00 2:15					3	1	1							5	62.5-77.5	3		
2:15 2:30					1	2	1							4	71.1-86.1	3		
2:30 2:45				2										2	55.1-70.1	2		
2:45 3:00				1	1	2	1							5	67.0-82.0	3		
2:00 3:00				3	5	5	3							16	62.5-77.5	3		
3:00 3:15					3									3	65.1-80.1	3		
3:15 3:30				3		1	1							5	54.5-69.5	3		
3:30 3:45																		
3:45 4:00				1		1								2	52.6-67.6	1		
3:00 4:00				4	3	2	1							10	65.1-80.1	3		
4:00 4:15						1								1	70.8-85.8	1		
4:15 4:30				3		1								4	56.0-71.0	3		
4:30 4:45				1	2	1								4	66.7-81.7	4		
4:45 5:00				1	5	5								11	72.2-87.2	10		
4:00 5:00				5	7	8								20	72.2-87.2	10		
5:00 5:15			1	5	3	6								15	74.6-89.6	8		
5:15 5:30				2	5	2	1		2					12	67.3-82.3	8		
5:30 5:45			1	5	9									15	65.5-80.5	13		
5:45 6:00				4	8	2	2	2						18	64.3-79.3	12		
5:00 6:00			2	16	25	10	3	2	2					60	65.5-80.5	13		
6:00 6:15				1	12	6	1							20	69.8-84.8	17		
6:15 6:30			1	10	13	8	2	1						35	63.5-78.5	22		
6:30 6:45				10	21	10	2							43	67.1-82.1	29		
6:45 7:00			4	9	32	3	1							49	65.3-80.3	40		
6:00 7:00			5	30	78	27	6	1						147	65.3-80.3	40		
7:00 7:15			11	24	25	5	2							67	65.1-80.1	43		
7:15 7:30			5	21	25	9								60	64.3-79.3	41		
7:30 7:45			6	23	49	11	3							92	66.5-81.5	64		
7:45 8:00			5	25	42	15	1							88	65.5-80.5	59		
7:00 8:00			27	93	141	40	6							307	66.5-81.5	64		
8:00 8:15			3	26	38	6	1							74	63.7-78.7	59		
8:15 8:30			9	30	53	9								101	66.5-81.5	78		
8:30 8:45			9	51	38	6								104	61.8-76.8	78		
8:45 9:00			2	36	30	5	1							74	61.6-76.6	60		
8:00 9:00				23	143	159	26	2						353	66.5-81.5	78		
9:00 9:15		6	7	11	25	16	2							67	62.2-77.2	39		
9:15 9:30				1	18	29	6	1						55	62.6-77.6	42		
9:30 9:45		2	5	5	16	30	9	2		1				70	64.3-79.3	43		
9:45 10:00				6	19	34	8							67	61.6-76.6	47		
9:00 10:00		8	12	23	78	109	25	3		1				259	61.6-76.6	47		
10:00 10:15			1	8	31	17	8							65	61.1-76.1	41		
10:15 10:30				6	26	24	5							61	61.3-76.3	43		
10:30 10:45				4	23	37	7	1						72	67.6-82.6	55		
10:45 11:00				9	32	24	4							69	62.5-77.5	51		
10:00 11:00			1	27	112	102	24	1						267	67.6-82.6	55		
11:00 11:15				7	34	21	7							69	59.7-74.7	49		
11:15 11:30				11	23	25	4	1						64	62.3-77.3	41		
11:30 11:45		1	5	14	36	25	8							89	61.6-76.6	57		
11:45 12:00				3	32	42	3	1						81	62.6-77.6	66		
11:00 12:00		1	5	35	125	113	22	2						303	62.6-77.6	66		

Report-2.4	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : South Road :																
Speeds,km/h ----->	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15			3	3	1									7	66.6-81.6	7	
0:15 0:30																	
0:30 0:45			2	1	1	2								6	67.8-82.8	4	
0:45 1:00				4										4	61.9-76.9	4	
00:00 1:00			5	8	2	2								17	66.6-81.6	7	
1:00 1:15				2	1									3	56.2-71.2	3	
1:15 1:30		1		1										2	34.3-49.3	1	
1:30 1:45			1	1	2									4	64.3-79.3	3	
1:45 2:00				1	2	1								4	63.3-78.3	3	
1:00 2:00		1	1	5	5	1								13	56.2-71.2	3	
2:00 2:15					1			1						2	65.4-80.4	1	
2:15 2:30				1	2			1						4	58.4-73.4	3	
2:30 2:45					2									2	63.8-78.8	2	
2:45 3:00				1										1	52.0-67.0	1	
2:00 3:00				2	5			2						9	58.4-73.4	3	
3:00 3:15			3	1	2	1								7	50.8-65.8	4	
3:15 3:30				1	1	2								4	56.7-71.7	2	
3:30 3:45				1	7									8	64.3-79.3	7	
3:45 4:00				1	2			1						4	64.3-79.3	3	
3:00 4:00			3	4	12	3		1						23	64.3-79.3	7	
4:00 4:15			1	3	6	1								11	68.8-83.8	8	
4:15 4:30			1	9	6	3								19	62.1-77.1	14	
4:30 4:45				11	16	2	1							30	63.7-78.7	24	
4:45 5:00			3	5	10	8	3							29	67.6-82.6	16	
4:00 5:00			5	28	38	14	4							89	63.7-78.7	24	
5:00 5:15				5	19	12	2							38	68.0-83.0	28	
5:15 5:30			1	15	24	13	2							55	67.7-82.7	37	
5:30 5:45				14	34	11	4							63	68.6-83.6	51	
5:45 6:00			6	36	47	14	2							105	65.3-80.3	72	
5:00 6:00			7	70	124	50	10							261	65.3-80.3	72	
6:00 6:15				38	49	6	1							94	65.3-80.3	80	
6:15 6:30			1	22	50	24	2							99	67.6-82.6	71	
6:30 6:45			5	40	60	20								125	64.1-79.1	91	
6:45 7:00			6	51	44	12	1							114	62.0-77.0	79	
6:00 7:00			12	151	203	62	4							432	64.1-79.1	91	
7:00 7:15			1	35	53	18								107	67.0-82.0	80	
7:15 7:30			1	35	54	24								114	65.5-80.5	82	
7:30 7:45			8	53	64	10								135	64.0-79.0	99	
7:45 8:00			6	63	64	14								147	62.2-77.2	118	
7:00 8:00			16	186	235	66								503	62.2-77.2	118	
8:00 8:15			18	74	57	10	1							160	61.7-76.7	114	
8:15 8:30			5	82	50	9								146	61.0-76.0	112	
8:30 8:45		1	5	42	51	15								114	61.6-76.6	79	
8:45 9:00			7	56	56	5								124	62.7-77.7	102	
8:00 9:00		1	35	254	214	39	1							544	61.7-76.7	114	
9:00 9:15	10	2	3	47	32	5								99	61.8-76.8	72	
9:15 9:30			7	57	43	6	2							115	60.6-75.6	85	
9:30 9:45			11	36	45	9	1							102	62.8-77.8	73	
9:45 10:00			13	35	30	11								89	61.8-76.8	59	
9:00 10:00	10	2	34	175	150	31	3							405	60.6-75.6	85	
10:00 10:15	11	1	4	37	45	5								103	62.0-77.0	75	
10:15 10:30		1	7	38	41	4	1							92	64.0-79.0	73	
10:30 10:45			3	36	47	7								93	65.6-80.6	80	
10:45 11:00			2	22	56	7	1							88	66.4-81.4	76	
10:00 11:00	11	2	16	133	189	23	2							376	65.6-80.6	80	
11:00 11:15			1	28	26	6	3							64	64.7-79.7	49	
11:15 11:30		1	4	47	26	6	1							85	62.0-77.0	67	
11:30 11:45			4	31	28	9	1	1						74	64.3-79.3	56	
11:45 12:00			5	28	35	10	1							79	60.2-75.2	54	
11:00 12:00		1	14	134	115	31	6	1						302	62.0-77.0	67	

Report-2.5	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : South Road :																
Speeds,km/h ----->	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15				4	2									6	72.4-87.4	6	
0:15 0:30			2	2	1									5	58.1-73.1	4	
0:30 0:45			5	2	1									8	66.1-81.1	8	
0:45 1:00			3	1										4	60.0-75.0	4	
00:00 1:00			10	9	4									23	66.1-81.1	8	
1:00 1:15			1	1										2	60.2-75.2	2	
1:15 1:30			2	2	1									5	63.5-78.5	4	
1:30 1:45			1											1	53.9-68.9	1	
1:45 2:00			1	2										3	64.8-79.8	3	
1:00 2:00			5	5	1									11	63.5-78.5	4	
2:00 2:15			1											1	41.0-56.0	1	
2:15 2:30					1	1								2	77.5-92.5	2	
2:30 2:45			1	1										2	62.8-77.8	2	
2:45 3:00			2		2									4	68.2-83.2	3	
2:00 3:00			1	3	1	3	1							9	68.2-83.2	3	
3:00 3:15			1	1	1	1								4	67.6-82.6	2	
3:15 3:30			1	3										4	62.3-77.3	3	
3:30 3:45				1	2	1								4	73.9-88.9	3	
3:45 4:00				2	2	1								5	67.6-82.6	4	
3:00 4:00			1	2	6	5	3							17	67.6-82.6	4	
4:00 4:15				4	7	2								13	60.1-75.1	10	
4:15 4:30			1	8	8	4								21	60.4-75.4	14	
4:30 4:45			1	8	9	5	3							26	69.5-84.5	14	
4:45 5:00				5	17	6	1							29	65.0-80.0	22	
4:00 5:00			2	25	41	17	4							89	65.0-80.0	22	
5:00 5:15			2	11	15	7	1							36	64.5-79.5	25	
5:15 5:30			3	6	21	14	1							45	68.8-83.8	33	
5:30 5:45			1	24	38	6	3							72	65.0-80.0	60	
5:45 6:00			11	23	45	10								89	67.9-82.9	61	
5:00 6:00			17	64	119	37	5							242	67.9-82.9	61	
6:00 6:15			3	36	42	14								95	65.0-80.0	66	
6:15 6:30				26	51	23	2		1					103	69.6-84.6	79	
6:30 6:45				35	57	13	1							106	66.6-81.6	82	
6:45 7:00				25	59	25	3							112	68.2-83.2	84	
6:00 7:00			3	122	209	75	6		1					416	68.2-83.2	84	
7:00 7:15			5	9	61	20	1							96	70.2-85.2	78	
7:15 7:30			1	24	54	25	1							105	69.9-84.9	81	
7:30 7:45	5	2	10	55	52	13	1							138	66.0-81.0	89	
7:45 8:00			13	54	73	19	1	1	1					162	62.3-77.3	105	
7:00 8:00	5	2	29	142	240	77	4	1	1					501	62.3-77.3	105	
8:00 8:15			21	68	56	15	1							161	62.5-77.5	97	
8:15 8:30			2	52	63	14	2							133	62.3-77.3	102	
8:30 8:45			7	67	56	7								137	63.4-78.4	111	
8:45 9:00			4	45	47	11								107	65.9-80.9	82	
8:00 9:00			34	232	222	47	3							538	63.4-78.4	111	
9:00 9:15			6	43	49	13								111	62.9-77.9	79	
9:15 9:30			4	42	42	7								95	63.6-78.6	74	
9:30 9:45			4	36	45	4	2							91	64.5-79.5	73	
9:45 10:00	1	1	9	50	40	6								107	62.7-77.7	82	
9:00 10:00	1	1	23	171	176	30	2							404	62.7-77.7	82	
10:00 10:15			3	22	34	24	7	3						93	54.1-69.1	51	
10:15 10:30			1	6	38	24	7	1						77	59.9-74.9	60	
10:30 10:45			4	31	33	7	1							76	64.7-79.7	58	
10:45 11:00			1	6	30	31	5							73	60.8-75.8	49	
10:00 11:00			5	38	133	112	26	5						319	59.9-74.9	60	
11:00 11:15			1	6	39	19	9	1						75	60.5-75.5	52	
11:15 11:30				8	40	31	4	2	1					86	62.4-77.4	65	
11:30 11:45			3	5	30	28	5							71	63.5-78.5	52	
11:45 12:00			2	11	32	28	6	2						81	62.0-77.0	53	
11:00 12:00			6	30	141	106	24	5	1					313	62.4-77.4	65	

Report-2.6	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : South Road :																
Speeds,km/h ----->	Dates : 5/9/2019																
	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15				2	2	2	1							7	67.1-82.1	5	
0:15 0:30				2	3									5	63.0-78.0	5	
0:30 0:45			1	1	1	1								4	66.8-81.8	3	
0:45 1:00				2	1									3	57.3-72.3	3	
00:00 1:00			1	7	7	3	1							19	67.1-82.1	5	
1:00 1:15					3	1								4	66.5-81.5	4	
1:15 1:30					4									4	63.9-78.9	4	
1:30 1:45			2	2	1									5	49.0-64.0	4	
1:45 2:00			1		2									3	57.3-72.3	2	
1:00 2:00			3	2	10	1								16	66.5-81.5	4	
2:00 2:15					2	1								3	63.6-78.6	2	
2:15 2:30							1							1	84.9-99.9	1	
2:30 2:45			1	1	1									3	55.3-70.3	2	
2:45 3:00																	
2:00 3:00			1	1	3	1	1							7	63.6-78.6	2	
3:00 3:15	1			1	1	1								3	15.5-30.5	1	
3:15 3:30			1	1	3	1								6	65.0-80.0	4	
3:30 3:45					5	2								7	70.8-85.8	7	
3:45 4:00			1	2	2			1						6	63.5-78.5	4	
3:00 4:00	1		2	4	10	4		1						22	70.8-85.8	7	
4:00 4:15				3	4		2							9	58.3-73.3	5	
4:15 4:30				4	8	4								16	63.2-78.2	12	
4:30 4:45			1	5	9	5								20	63.3-78.3	13	
4:45 5:00				4	19	6	3							32	65.6-80.6	22	
4:00 5:00			1	16	40	15	5							77	65.6-80.6	22	
5:00 5:15		1		4	20	13	2							40	68.8-83.8	32	
5:15 5:30			1	18	25	4	1							49	62.0-77.0	38	
5:30 5:45			5	23	23	3	3							57	63.8-78.8	39	
5:45 6:00			1	29	39	11								80	65.1-80.1	65	
5:00 6:00		1	7	74	107	31	6							226	65.1-80.1	65	
6:00 6:15				24	67	13	1							105	68.7-83.7	91	
6:15 6:30			1	31	64	13	1							110	66.3-81.3	92	
6:30 6:45			2	31	47	21	1							102	66.5-81.5	74	
6:45 7:00			5	40	66	18	1							130	66.7-81.7	98	
6:00 7:00			8	126	244	65	4							447	66.7-81.7	98	
7:00 7:15				8	33	48	11							100	65.0-80.0	71	
7:15 7:30	4	7	5	45	59	9								129	64.8-79.8	94	
7:30 7:45	2	3	16	48	42	9								120	60.9-75.9	78	
7:45 8:00		1	21	75	46	13								156	59.2-74.2	111	
7:00 8:00	6	11	50	201	195	42								505	59.2-74.2	111	
8:00 8:15			22	68	56	11								157	60.6-75.6	107	
8:15 8:30	1	2	15	52	62	8								140	62.9-77.9	101	
8:30 8:45			13	58	40	5								116	61.0-76.0	86	
8:45 9:00			4	32	48	10								94	62.0-77.0	73	
8:00 9:00	1	2	54	210	206	34								507	60.6-75.6	107	
9:00 9:15		1	7	54	34	6								102	62.2-77.2	83	
9:15 9:30			1	16	27	55	1							100	61.6-76.6	75	
9:30 9:45			1	3	30	45	9	2						90	61.8-76.8	64	
9:45 10:00		2	1	9	49	38	6	1						106	63.5-78.5	78	
9:00 10:00		3	3	35	160	172	22	3						398	62.2-77.2	83	
10:00 10:15			2	3	28	47	4							84	66.1-81.1	69	
10:15 10:30			1	5	56	24	6							92	59.5-74.5	76	
10:30 10:45				3	37	21	4	1						66	59.7-74.7	51	
10:45 11:00				8	27	38	5	1						79	64.3-79.3	55	
10:00 11:00			3	19	148	130	19	2						321	59.5-74.5	76	
11:00 11:15			1	10	42	27	4							84	61.6-76.6	61	
11:15 11:30			1	8	32	30	6							77	62.2-77.2	57	
11:30 11:45		2	11	8	26	22	3							72	61.2-76.2	45	
11:45 12:00				8	37	26	7							78	63.5-78.5	55	
11:00 12:00		2	13	34	137	105	20							311	61.6-76.6	61	

Report-2.7	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : North + South							Road :									
Speeds,km/h ----->	Dates : 5/7/2019																
	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15				10	9	2								21	66.0-81.0	18	
0:15 0:30			1	3	2	1								7	60.4-75.4	5	
0:30 0:45			1	7	8	1	2							19	63.9-78.9	15	
0:45 1:00					5									5	61.9-76.9	5	
00:00 1:00			2	20	24	4	2							52	66.0-81.0	18	
1:00 1:15				3	7	1								11	63.0-78.0	10	
1:15 1:30		1	1	2	1									5	57.8-72.8	4	
1:30 1:45			2	4	3									9	54.1-69.1	6	
1:45 2:00				1	6	3								10	71.6-86.6	9	
1:00 2:00		1	3	10	17	4								35	63.0-78.0	10	
2:00 2:15				2	5	2		1						10	65.4-80.4	7	
2:15 2:30				2	3	1		1						7	63.3-78.3	5	
2:30 2:45				1	5									6	63.8-78.8	6	
2:45 3:00				4	2									6	56.1-71.1	5	
2:00 3:00				9	15	3		2						29	65.4-80.4	7	
3:00 3:15			3	4	2	1								10	55.1-70.1	7	
3:15 3:30				1	2	3	1							7	70.6-85.6	4	
3:30 3:45				1	8									9	64.3-79.3	8	
3:45 4:00				2	2	1		1						6	64.3-79.3	4	
3:00 4:00			3	8	14	5	1	1						32	64.3-79.3	8	
4:00 4:15			1	5	7	2								15	58.2-73.2	10	
4:15 4:30			2	9	9	5								25	62.1-77.1	16	
4:30 4:45				12	20	2	1							35	63.7-78.7	29	
4:45 5:00			4	9	12	8	3							36	67.6-82.6	18	
4:00 5:00			7	35	48	17	4							111	63.7-78.7	29	
5:00 5:15				8	21	13	2							44	68.0-83.0	31	
5:15 5:30			2	18	26	19	4							69	67.7-82.7	42	
5:30 5:45			4	20	38	12	5							79	67.3-82.3	57	
5:45 6:00			7	44	63	16	2							132	65.3-80.3	94	
5:00 6:00			13	90	148	60	13							324	65.3-80.3	94	
6:00 6:15			2	42	60	11	1							116	67.4-82.4	93	
6:15 6:30			1	36	61	26	3							127	67.6-82.6	93	
6:30 6:45			7	59	79	23								168	66.1-81.1	126	
6:45 7:00			16	77	64	17	2							176	63.7-78.7	120	
6:00 7:00			26	214	264	77	6							587	66.1-81.1	126	
7:00 7:15			6	52	80	26	1							165	66.7-81.7	116	
7:15 7:30			4	59	88	34	1							186	64.9-79.9	130	
7:30 7:45			10	97	88	21	1							217	61.7-76.7	158	
7:45 8:00			21	101	95	20								237	62.2-77.2	178	
7:00 8:00			41	309	351	101	3							805	62.2-77.2	178	
8:00 8:15			23	113	91	18	2							247	64.2-79.2	180	
8:15 8:30			19	111	85	14	1							230	64.5-79.5	170	
8:30 8:45		1	25	103	73	17								219	61.4-76.4	157	
8:45 9:00		1	16	105	78	6								206	62.5-77.5	162	
8:00 9:00		2	83	432	327	55	3							902	64.2-79.2	180	
9:00 9:15	10	2	7	83	47	9	1							159	62.2-77.2	118	
9:15 9:30			8	85	59	12	2							166	62.2-77.2	124	
9:30 9:45	1	2	18	68	65	17	1							172	62.8-77.8	121	
9:45 10:00			15	78	59	17								169	61.8-76.8	119	
9:00 10:00	11	4	48	314	230	55	4							666	62.2-77.2	124	
10:00 10:15	11	1	11	57	74	10	2							166	62.4-77.4	118	
10:15 10:30		1	13	59	73	7	1							154	64.0-79.0	122	
10:30 10:45			7	59	73	13	1							153	64.0-79.0	119	
10:45 11:00			3	46	90	17	2							158	64.5-79.5	121	
10:00 11:00	11	2	34	221	310	47	6							631	64.0-79.0	122	
11:00 11:15			3	54	50	11	3	1						122	64.3-79.3	95	
11:15 11:30	2	1	10	80	57	9	1							160	62.0-77.0	122	
11:30 11:45		1	14	60	57	16	2	1						151	64.2-79.2	104	
11:45 12:00			11	67	70	18	2							168	65.3-80.3	114	
11:00 12:00	2	2	38	261	234	54	8	2						601	62.0-77.0	122	

Report-2.8	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : North + South Road :																
Speeds,km/h ----->	Dates : 5/8/2019																
	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15			4	9	6	1								20	72.4-87.4	15	
0:15 0:30			7	4	2		1							14	61.1-76.1	11	
0:30 0:45		2	8	6	3									19	66.1-81.1	15	
0:45 1:00			5	4	3	1								13	60.8-75.8	7	
00:00 1:00		2	24	23	14	2	1							66	72.4-87.4	15	
1:00 1:15			3	7										10	63.6-78.6	9	
1:15 1:30			4	4	2	2								12	63.5-78.5	8	
1:30 1:45		1	4	1										6	55.1-70.1	5	
1:45 2:00		1	4	4	1									10	59.3-74.3	7	
1:00 2:00		2	15	16	3	2								38	63.6-78.6	9	
2:00 2:15		1	1	2		2								6	64.6-79.6	3	
2:15 2:30		1	1		1	1								4	55.0-70.0	2	
2:30 2:45			2	4	1									7	63.3-78.3	6	
2:45 3:00			2	2	2	1								7	68.2-83.2	5	
2:00 3:00		2	6	8	4	4								24	63.3-78.3	6	
3:00 3:15		1	2	2	3	1								9	68.6-83.6	5	
3:15 3:30			2	4		1								7	62.4-77.4	5	
3:30 3:45			1	2	2	1								6	73.9-88.9	4	
3:45 4:00			1	5	2	2								10	67.6-82.6	8	
3:00 4:00		1	6	13	7	5								32	67.6-82.6	8	
4:00 4:15			6	7	2									15	60.1-75.1	12	
4:15 4:30		1	9	9	4									23	60.4-75.4	16	
4:30 4:45		1	8	11	8	3								31	69.5-84.5	19	
4:45 5:00		1	7	20	7	1								36	65.0-80.0	26	
4:00 5:00		3	30	47	21	4								105	65.0-80.0	26	
5:00 5:15		2	14	18	8	1								43	64.5-79.5	31	
5:15 5:30		3	11	24	18	1								57	68.8-83.8	40	
5:30 5:45		2	31	47	9	3								92	65.0-80.0	75	
5:45 6:00		11	29	60	16	1								117	67.9-82.9	80	
5:00 6:00		18	85	149	51	6								309	67.9-82.9	80	
6:00 6:15		4	48	48	16	3								119	65.0-80.0	82	
6:15 6:30			39	76	27	3		1						146	67.6-82.6	109	
6:30 6:45		2	50	76	24	4	1							157	67.0-82.0	112	
6:45 7:00		3	39	90	31	3	2							168	68.2-83.2	125	
6:00 7:00		9	176	290	98	13	3	1						590	68.2-83.2	125	
7:00 7:15		7	32	96	26	1								162	68.2-83.2	121	
7:15 7:30		1	51	82	34	1								169	65.7-80.7	120	
7:30 7:45	5	2	11	78	108	19	1							224	66.0-81.0	161	
7:45 8:00			15	95	115	27	2	1	1					256	63.8-78.8	174	
7:00 8:00	5	2	34	256	401	106	5	1	1					811	63.8-78.8	174	
8:00 8:15			25	105	89	24	1							244	63.6-78.6	156	
8:15 8:30			12	93	113	18	4							240	62.7-77.7	181	
8:30 8:45			14	116	94	13								237	63.4-78.4	182	
8:45 9:00			12	83	85	18	3							201	64.5-79.5	149	
8:00 9:00			63	397	381	73	8							922	63.4-78.4	182	
9:00 9:15			10	80	81	16	1							188	62.9-77.9	137	
9:15 9:30	4		9	62	63	13	2							153	64.3-79.3	108	
9:30 9:45			6	60	75	10	2							153	65.8-80.8	121	
9:45 10:00	1	1	10	75	73	12								172	63.0-78.0	134	
9:00 10:00	5	1	35	277	292	51	5							666	62.9-77.9	137	
10:00 10:15		3	26	64	51	14	4							162	61.6-76.6	98	
10:15 10:30		1	9	59	67	10	1							147	65.0-80.0	114	
10:30 10:45			5	55	65	14	1							140	65.2-80.2	108	
10:45 11:00		1	12	65	53	15								146	60.8-75.8	99	
10:00 11:00		5	52	243	236	53	6							595	65.0-80.0	114	
11:00 11:15		1	11	73	45	16	2							148	62.4-77.4	104	
11:15 11:30			10	59	65	8	3	1						146	63.7-78.7	116	
11:30 11:45		4	12	68	51	11								146	63.5-78.5	108	
11:45 12:00		2	12	58	65	20	2							159	63.0-78.0	106	
11:00 12:00		7	45	258	226	55	7	1						599	63.7-78.7	116	

Report-2.9	Location : 5019053NS Hwy 50 - 600m South of Emil Kolb Parkway														Total	Pace Speed	Number in Pace
	Direction : North + South Road :																
	Dates : 5/9/2019																
Speeds,km/h ----->	41	51	61	71	81	91	101	111	121	131	141	151	160				
00:00 0:15			12	6	4	1									23	67.1-82.1	16
0:15 0:30			1	3	6	2	1								13	66.8-81.8	9
0:30 0:45			1	2	6	1									10	63.0-78.0	8
0:45 1:00				7	3		1								11	57.5-72.5	9
00:00 1:00			2	24	21	7	3								57	67.1-82.1	16
1:00 1:15				2	6	4									12	68.7-83.7	11
1:15 1:30				2	8	2									12	69.9-84.9	11
1:30 1:45		1	3	7	1		1								13	53.5-68.5	10
1:45 2:00			1	2	2	2									7	57.3-72.3	4
1:00 2:00		1	4	13	17	8	1								44	68.7-83.7	11
2:00 2:15					5	2	1								8	63.6-78.6	5
2:15 2:30					1	2	2								5	71.1-86.1	3
2:30 2:45			1	3	1										5	55.3-70.3	4
2:45 3:00				1	1	2	1								5	67.0-82.0	3
2:00 3:00			1	4	8	6	4								23	63.6-78.6	5
3:00 3:15	1			1	3	1									6	65.1-80.1	4
3:15 3:30			1	4	3	2	1								11	59.7-74.7	6
3:30 3:45					5	2									7	70.8-85.8	7
3:45 4:00			1	3	2	1		1							8	63.5-78.5	5
3:00 4:00	1		2	8	13	6	1	1							32	70.8-85.8	7
4:00 4:15				3	4	1	2								10	58.3-73.3	5
4:15 4:30				7	8	5									20	63.2-78.2	14
4:30 4:45			1	6	11	6									24	67.5-82.5	16
4:45 5:00				5	24	11	3								43	71.0-86.0	31
4:00 5:00			1	21	47	23	5								97	71.0-86.0	31
5:00 5:15	1		1	9	23	19	2								55	70.5-85.5	38
5:15 5:30			1	20	30	6	2		2						61	66.4-81.4	45
5:30 5:45			6	28	32	3	3								72	66.0-81.0	51
5:45 6:00			1	33	47	13	2	2							98	65.1-80.1	77
5:00 6:00	1		9	90	132	41	9	2	2						286	65.1-80.1	77
6:00 6:15				25	79	19	2								125	68.7-83.7	107
6:15 6:30			2	41	77	21	3	1							145	65.0-80.0	110
6:30 6:45			2	41	68	31	3								145	67.1-82.1	102
6:45 7:00			9	49	98	21	2								179	66.7-81.7	138
6:00 7:00			13	156	322	92	10	1							594	66.7-81.7	138
7:00 7:15				19	57	73	16	2							167	65.1-80.1	114
7:15 7:30	4	7	10	66	84	18									189	64.8-79.8	134
7:30 7:45	2	3	22	71	91	20	3								212	63.2-78.2	135
7:45 8:00		1	26	100	88	28	1								244	61.9-76.9	159
7:00 8:00	6	11	77	294	336	82	6								812	61.9-76.9	159
8:00 8:15			25	94	94	17	1								231	60.6-75.6	158
8:15 8:30	1	2	24	82	115	17									241	64.6-79.6	174
8:30 8:45			22	109	78	11									220	61.1-76.1	163
8:45 9:00			6	68	78	15	1								168	61.6-76.6	132
8:00 9:00	1	2	77	353	365	60	2								860	64.6-79.6	174
9:00 9:15	7	7	18	79	50	8									169	62.2-77.2	122
9:15 9:30		1	17	45	84	7	1								155	62.6-77.6	117
9:30 9:45	2	6	8	46	75	18	4		1						160	64.3-79.3	107
9:45 10:00	2	1	15	68	72	14	1								173	63.5-78.5	125
9:00 10:00	11	15	58	238	281	47	6		1						657	63.5-78.5	125
10:00 10:15		3	11	59	64	12									149	62.3-77.3	105
10:15 10:30		1	11	82	48	11									153	60.5-75.5	115
10:30 10:45			7	60	58	11	2								138	63.9-78.9	100
10:45 11:00			17	59	62	9	1								148	62.6-77.6	102
10:00 11:00		4	46	260	232	43	3								588	60.5-75.5	115
11:00 11:15		1	17	76	48	11									153	60.0-75.0	108
11:15 11:30		1	19	55	55	10	1								141	62.3-77.3	98
11:30 11:45	3	16	22	62	47	11									161	61.4-76.4	101
11:45 12:00			11	69	68	10	1								159	63.5-78.5	121
11:00 12:00	3	18	69	262	218	42	2								614	63.5-78.5	121

Report-3.1 Directions ----->	Location :		5019053NS		Hwy 50 - 600m South of Emil Kolb Parkway		Road :			
	Dates :		5/7/2019							
	North Volume	%	South Volume	%	East Volume	%	West Volume	%	Total Volume	%
00:00 0:15	14	0.2%	7	0.1%					21	0.2%
0:15 0:30	7	0.1%							7	0.1%
0:30 0:45	13	0.2%	6	0.1%					19	0.2%
0:45 1:00	1	0.0%	4	0.1%					5	0.0%
00:00 1:00	35	0.5%	17	0.3%					52	0.4%
1:00 1:15	8	0.1%	3	0.0%					11	0.1%
1:15 1:30	3	0.0%	2	0.0%					5	0.0%
1:30 1:45	5	0.1%	4	0.1%					9	0.1%
1:45 2:00	6	0.1%	4	0.1%					10	0.1%
1:00 2:00	22	0.3%	13	0.2%					35	0.3%
2:00 2:15	8	0.1%	2	0.0%					10	0.1%
2:15 2:30	3	0.0%	4	0.1%					7	0.1%
2:30 2:45	4	0.1%	2	0.0%					6	0.0%
2:45 3:00	5	0.1%	1	0.0%					6	0.0%
2:00 3:00	20	0.3%	9	0.1%					29	0.2%
3:00 3:15	3	0.0%	7	0.1%					10	0.1%
3:15 3:30	3	0.0%	4	0.1%					7	0.1%
3:30 3:45	1	0.0%	8	0.1%					9	0.1%
3:45 4:00	2	0.0%	4	0.1%					6	0.0%
3:00 4:00	9	0.1%	23	0.4%					32	0.3%
4:00 4:15	4	0.1%	11	0.2%					15	0.1%
4:15 4:30	6	0.1%	19	0.3%					25	0.2%
4:30 4:45	5	0.1%	30	0.5%					35	0.3%
4:45 5:00	7	0.1%	29	0.5%					36	0.3%
4:00 5:00	22	0.3%	89	1.5%					111	0.9%
5:00 5:15	6	0.1%	38	0.6%					44	0.3%
5:15 5:30	14	0.2%	55	0.9%					69	0.5%
5:30 5:45	16	0.2%	63	1.0%					79	0.6%
5:45 6:00	27	0.4%	105	1.7%					132	1.0%
5:00 6:00	63	1.0%	261	4.3%					324	2.6%
6:00 6:15	22	0.3%	94	1.5%					116	0.9%
6:15 6:30	28	0.4%	99	1.6%					127	1.0%
6:30 6:45	43	0.7%	125	2.0%					168	1.3%
6:45 7:00	62	0.9%	114	1.9%					176	1.4%
6:00 7:00	155	2.4%	432	7.1%					587	4.6%
7:00 7:15	58	0.9%	107	1.7%					165	1.3%
7:15 7:30	72	1.1%	114	1.9%					186	1.5%
7:30 7:45	82	1.3%	135	2.2%					217	1.7%
7:45 8:00	90	1.4%	147	2.4%					237	1.9%
7:00 8:00	302	4.6%	503	8.2%					805	6.4%
8:00 8:15	87	1.3%	160	2.6%					247	2.0%
8:15 8:30	84	1.3%	146	2.4%					230	1.8%
8:30 8:45	105	1.6%	114	1.9%					219	1.7%
8:45 9:00	82	1.3%	124	2.0%					206	1.6%
8:00 9:00	358	5.5%	544	8.9%					902	7.1%
9:00 9:15	60	0.9%	99	1.6%					159	1.3%
9:15 9:30	51	0.8%	115	1.9%					166	1.3%
9:30 9:45	70	1.1%	102	1.7%					172	1.4%
9:45 10:00	80	1.2%	89	1.5%					169	1.3%
9:00 10:00	261	4.0%	405	6.6%					666	5.3%
10:00 10:15	63	1.0%	103	1.7%					166	1.3%
10:15 10:30	62	0.9%	92	1.5%					154	1.2%
10:30 10:45	60	0.9%	93	1.5%					153	1.2%
10:45 11:00	70	1.1%	88	1.4%					158	1.2%
10:00 11:00	255	3.9%	376	6.1%					631	5.0%
11:00 11:15	58	0.9%	64	1.0%					122	1.0%
11:15 11:30	75	1.1%	85	1.4%					160	1.3%
11:30 11:45	77	1.2%	74	1.2%					151	1.2%
11:45 12:00	89	1.4%	79	1.3%					168	1.3%
11:00 12:00	299	4.6%	302	4.9%					601	4.8%

12:00	12:15	85	1.3%	80	1.3%			165	1.3%
12:15	12:30	86	1.3%	62	1.0%			148	1.2%
12:30	12:45	91	1.4%	72	1.2%			163	1.3%
12:45	13:00	86	1.3%	84	1.4%			170	1.3%
12:00	13:00	348	5.3%	298	4.9%			646	5.1%
13:00	13:15	104	1.6%	77	1.3%			181	1.4%
13:15	13:30	79	1.2%	58	0.9%			137	1.1%
13:30	13:45	106	1.6%	62	1.0%			168	1.3%
13:45	14:00	104	1.6%	78	1.3%			182	1.4%
13:00	14:00	393	6.0%	275	4.5%			668	5.3%
14:00	14:15	81	1.2%	89	1.5%			170	1.3%
14:15	14:30	107	1.6%	77	1.3%			184	1.5%
14:30	14:45	118	1.8%	83	1.4%			201	1.6%
14:45	15:00	119	1.8%	95	1.6%			214	1.7%
14:00	15:00	425	6.5%	344	5.6%			769	6.1%
15:00	15:15	118	1.8%	83	1.4%			201	1.6%
15:15	15:30	160	2.4%	77	1.3%			237	1.9%
15:30	15:45	169	2.6%	82	1.3%			251	2.0%
15:45	16:00	148	2.3%	78	1.3%			226	1.8%
15:00	16:00	595	9.1%	320	5.2%			915	7.2%
16:00	16:15	145	2.2%	102	1.7%			247	2.0%
16:15	16:30	155	2.4%	97	1.6%			252	2.0%
16:30	16:45	149	2.3%	96	1.6%			245	1.9%
16:45	17:00	150	2.3%	113	1.8%			263	2.1%
16:00	17:00	599	9.2%	408	6.7%			1007	8.0%
17:00	17:15	182	2.8%	106	1.7%			288	2.3%
17:15	17:30	134	2.1%	118	1.9%			252	2.0%
17:30	17:45	147	2.3%	95	1.6%			242	1.9%
17:45	18:00	133	2.0%	110	1.8%			243	1.9%
17:00	18:00	596	9.1%	429	7.0%			1025	8.1%
18:00	18:15	122	1.9%	122	2.0%			244	1.9%
18:15	18:30	169	2.6%	101	1.7%			270	2.1%
18:30	18:45	111	1.7%	79	1.3%			190	1.5%
18:45	19:00	124	1.9%	70	1.1%			194	1.5%
18:00	19:00	526	8.1%	372	6.1%			898	7.1%
19:00	19:15	110	1.7%	58	0.9%			168	1.3%
19:15	19:30	110	1.7%	62	1.0%			172	1.4%
19:30	19:45	116	1.8%	73	1.2%			189	1.5%
19:45	20:00	111	1.7%	72	1.2%			183	1.4%
19:00	20:00	447	6.8%	265	4.3%			712	5.6%
20:00	20:15	87	1.3%	47	0.8%			134	1.1%
20:15	20:30	86	1.3%	36	0.6%			122	1.0%
20:30	20:45	87	1.3%	54	0.9%			141	1.1%
20:45	21:00	86	1.3%	30	0.5%			116	0.9%
20:00	21:00	346	5.3%	167	2.7%			513	4.1%
21:00	21:15	62	0.9%	49	0.8%			111	0.9%
21:15	21:30	62	0.9%	53	0.9%			115	0.9%
21:30	21:45	47	0.7%	35	0.6%			82	0.6%
21:45	22:00	54	0.8%	20	0.3%			74	0.6%
21:00	22:00	225	3.4%	157	2.6%			382	3.0%
22:00	22:15	44	0.7%	19	0.3%			63	0.5%
22:15	22:30	45	0.7%	19	0.3%			64	0.5%
22:30	22:45	20	0.3%	14	0.2%			34	0.3%
22:45	23:00	30	0.5%	11	0.2%			41	0.3%
22:00	23:00	139	2.1%	63	1.0%			202	1.6%
23:00	23:15	19	0.3%	10	0.2%			29	0.2%
23:15	23:30	34	0.5%	18	0.3%			52	0.4%
23:30	23:45	25	0.4%	11	0.2%			36	0.3%
23:45	00:00	13	0.2%	7	0.1%			20	0.2%
23:00	00:00	91	1.4%	46	0.8%			137	1.1%
Total		6531		6118				12649	100.0%
		51.6%		48.4%				100.0%	
AM PEAK		105		160				247	
period		8:30		8:00				8:00	
% of class		1.6%		2.6%				2.0%	
PM PEAK		182		122				288	
period		17:00		18:00				17:00	
% of class		2.8%		2.0%				2.3%	

Report-3.2	Location :		5019053NS		Hwy 50 - 600m South of Emil Kolb Parkway					
	Dates :		5/8/2019		Road :					
	North		South		East		West		Total	
Directions ----->	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
00:00 0:15	14	0.2%	6	0.1%					20	0.2%
0:15 0:30	9	0.1%	5	0.1%					14	0.1%
0:30 0:45	11	0.2%	8	0.1%					19	0.1%
0:45 1:00	9	0.1%	4	0.1%					13	0.1%
00:00 1:00	43	0.6%	23	0.4%					66	0.5%
1:00 1:15	8	0.1%	2	0.0%					10	0.1%
1:15 1:30	7	0.1%	5	0.1%					12	0.1%
1:30 1:45	5	0.1%	1	0.0%					6	0.0%
1:45 2:00	7	0.1%	3	0.0%					10	0.1%
1:00 2:00	27	0.4%	11	0.2%					38	0.3%
2:00 2:15	5	0.1%	1	0.0%					6	0.0%
2:15 2:30	2	0.0%	2	0.0%					4	0.0%
2:30 2:45	5	0.1%	2	0.0%					7	0.1%
2:45 3:00	3	0.0%	4	0.1%					7	0.1%
2:00 3:00	15	0.2%	9	0.1%					24	0.2%
3:00 3:15	5	0.1%	4	0.1%					9	0.1%
3:15 3:30	3	0.0%	4	0.1%					7	0.1%
3:30 3:45	2	0.0%	4	0.1%					6	0.0%
3:45 4:00	5	0.1%	5	0.1%					10	0.1%
3:00 4:00	15	0.2%	17	0.3%					32	0.2%
4:00 4:15	2	0.0%	13	0.2%					15	0.1%
4:15 4:30	2	0.0%	21	0.3%					23	0.2%
4:30 4:45	5	0.1%	26	0.4%					31	0.2%
4:45 5:00	7	0.1%	29	0.5%					36	0.3%
4:00 5:00	16	0.2%	89	1.4%					105	0.8%
5:00 5:15	7	0.1%	36	0.6%					43	0.3%
5:15 5:30	12	0.2%	45	0.7%					57	0.4%
5:30 5:45	20	0.3%	72	1.1%					92	0.7%
5:45 6:00	28	0.4%	89	1.4%					117	0.9%
5:00 6:00	67	1.0%	242	3.8%					309	2.4%
6:00 6:15	24	0.4%	95	1.5%					119	0.9%
6:15 6:30	43	0.6%	103	1.6%					146	1.1%
6:30 6:45	51	0.8%	106	1.7%					157	1.2%
6:45 7:00	56	0.8%	112	1.8%					168	1.3%
6:00 7:00	174	2.6%	416	6.5%					590	4.5%
7:00 7:15	66	1.0%	96	1.5%					162	1.2%
7:15 7:30	64	1.0%	105	1.6%					169	1.3%
7:30 7:45	86	1.3%	138	2.2%					224	1.7%
7:45 8:00	94	1.4%	162	2.5%					256	2.0%
7:00 8:00	310	4.7%	501	7.9%					811	6.2%
8:00 8:15	83	1.2%	161	2.5%					244	1.9%
8:15 8:30	107	1.6%	133	2.1%					240	1.8%
8:30 8:45	100	1.5%	137	2.2%					237	1.8%
8:45 9:00	94	1.4%	107	1.7%					201	1.5%
8:00 9:00	384	5.8%	538	8.4%					922	7.1%
9:00 9:15	77	1.2%	111	1.7%					188	1.4%
9:15 9:30	58	0.9%	95	1.5%					153	1.2%
9:30 9:45	62	0.9%	91	1.4%					153	1.2%
9:45 10:00	65	1.0%	107	1.7%					172	1.3%
9:00 10:00	262	3.9%	404	6.3%					666	5.1%
10:00 10:15	69	1.0%	93	1.5%					162	1.2%
10:15 10:30	70	1.1%	77	1.2%					147	1.1%
10:30 10:45	64	1.0%	76	1.2%					140	1.1%
10:45 11:00	73	1.1%	73	1.1%					146	1.1%
10:00 11:00	276	4.1%	319	5.0%					595	4.6%
11:00 11:15	73	1.1%	75	1.2%					148	1.1%
11:15 11:30	60	0.9%	86	1.4%					146	1.1%
11:30 11:45	75	1.1%	71	1.1%					146	1.1%
11:45 12:00	78	1.2%	81	1.3%					159	1.2%
11:00 12:00	286	4.3%	313	4.9%					599	4.6%

12:00	12:15	94	1.4%	80	1.3%			174	1.3%
12:15	12:30	86	1.3%	96	1.5%			182	1.4%
12:30	12:45	86	1.3%	63	1.0%			149	1.1%
12:45	13:00	79	1.2%	93	1.5%			172	1.3%
12:00	13:00	345	5.2%	332	5.2%			677	5.2%
13:00	13:15	99	1.5%	63	1.0%			162	1.2%
13:15	13:30	80	1.2%	71	1.1%			151	1.2%
13:30	13:45	77	1.2%	81	1.3%			158	1.2%
13:45	14:00	91	1.4%	76	1.2%			167	1.3%
13:00	14:00	347	5.2%	291	4.6%			638	4.9%
14:00	14:15	88	1.3%	93	1.5%			181	1.4%
14:15	14:30	125	1.9%	81	1.3%			206	1.6%
14:30	14:45	121	1.8%	75	1.2%			196	1.5%
14:45	15:00	114	1.7%	94	1.5%			208	1.6%
14:00	15:00	448	6.7%	343	5.4%			791	6.1%
15:00	15:15	142	2.1%	85	1.3%			227	1.7%
15:15	15:30	157	2.4%	108	1.7%			265	2.0%
15:30	15:45	149	2.2%	75	1.2%			224	1.7%
15:45	16:00	104	1.6%	121	1.9%			225	1.7%
15:00	16:00	552	8.3%	389	6.1%			941	7.2%
16:00	16:15	138	2.1%	90	1.4%			228	1.8%
16:15	16:30	159	2.4%	120	1.9%			279	2.1%
16:30	16:45	86	1.3%	117	1.8%			203	1.6%
16:45	17:00	197	3.0%	117	1.8%			314	2.4%
16:00	17:00	580	8.7%	444	7.0%			1024	7.9%
17:00	17:15	169	2.5%	109	1.7%			278	2.1%
17:15	17:30	168	2.5%	114	1.8%			282	2.2%
17:30	17:45	157	2.4%	106	1.7%			263	2.0%
17:45	18:00	158	2.4%	111	1.7%			269	2.1%
17:00	18:00	652	9.8%	440	6.9%			1092	8.4%
18:00	18:15	145	2.2%	90	1.4%			235	1.8%
18:15	18:30	136	2.0%	119	1.9%			255	2.0%
18:30	18:45	133	2.0%	74	1.2%			207	1.6%
18:45	19:00	115	1.7%	86	1.4%			201	1.5%
18:00	19:00	529	7.9%	369	5.8%			898	6.9%
19:00	19:15	107	1.6%	72	1.1%			179	1.4%
19:15	19:30	102	1.5%	79	1.2%			181	1.4%
19:30	19:45	106	1.6%	67	1.1%			173	1.3%
19:45	20:00	89	1.3%	71	1.1%			160	1.2%
19:00	20:00	404	6.1%	289	4.5%			693	5.3%
20:00	20:15	94	1.4%	64	1.0%			158	1.2%
20:15	20:30	87	1.3%	81	1.3%			168	1.3%
20:30	20:45	98	1.5%	75	1.2%			173	1.3%
20:45	21:00	78	1.2%	65	1.0%			143	1.1%
20:00	21:00	357	5.4%	285	4.5%			642	4.9%
21:00	21:15	67	1.0%	36	0.6%			103	0.8%
21:15	21:30	68	1.0%	43	0.7%			111	0.9%
21:30	21:45	76	1.1%	29	0.5%			105	0.8%
21:45	22:00	68	1.0%	36	0.6%			104	0.8%
21:00	22:00	279	4.2%	144	2.3%			423	3.2%
22:00	22:15	51	0.8%	27	0.4%			78	0.6%
22:15	22:30	39	0.6%	32	0.5%			71	0.5%
22:30	22:45	41	0.6%	28	0.4%			69	0.5%
22:45	23:00	54	0.8%	21	0.3%			75	0.6%
22:00	23:00	185	2.8%	108	1.7%			293	2.2%
23:00	23:15	29	0.4%	11	0.2%			40	0.3%
23:15	23:30	35	0.5%	15	0.2%			50	0.4%
23:30	23:45	32	0.5%	12	0.2%			44	0.3%
23:45	00:00	9	0.1%	16	0.3%			25	0.2%
23:00	00:00	105	1.6%	54	0.8%			159	1.2%
Total		6658		6370				13028	100.0%
		51.1%		48.9%				100.0%	
AM PEAK		107		162				256	
period		8:15		7:45				7:45	
% of class		1.6%		2.5%				2.0%	
PM PEAK		197		121				314	
period		16:45		15:45				16:45	
% of class		3.0%		1.9%				2.4%	

Report-3.3	Location :		5019053NS		Hwy 50 - 600m South of Emil Kolb Parkway					
	Dates :		5/9/2019		Road :					
	North		South		East		West		Total	
Directions ----->	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
00:00 0:15	16	0.2%	7	0.1%					23	0.2%
0:15 0:30	8	0.1%	5	0.1%					13	0.1%
0:30 0:45	6	0.1%	4	0.1%					10	0.1%
0:45 1:00	8	0.1%	3	0.1%					11	0.1%
00:00 1:00	38	0.6%	19	0.3%					57	0.5%
1:00 1:15	8	0.1%	4	0.1%					12	0.1%
1:15 1:30	8	0.1%	4	0.1%					12	0.1%
1:30 1:45	8	0.1%	5	0.1%					13	0.1%
1:45 2:00	4	0.1%	3	0.1%					7	0.1%
1:00 2:00	28	0.4%	16	0.3%					44	0.4%
2:00 2:15	5	0.1%	3	0.1%					8	0.1%
2:15 2:30	4	0.1%	1	0.0%					5	0.0%
2:30 2:45	2	0.0%	3	0.1%					5	0.0%
2:45 3:00	5	0.1%							5	0.0%
2:00 3:00	16	0.2%	7	0.1%					23	0.2%
3:00 3:15	3	0.0%	3	0.1%					6	0.0%
3:15 3:30	5	0.1%	6	0.1%					11	0.1%
3:30 3:45			7	0.1%					7	0.1%
3:45 4:00	2	0.0%	6	0.1%					8	0.1%
3:00 4:00	10	0.2%	22	0.4%					32	0.3%
4:00 4:15	1	0.0%	9	0.2%					10	0.1%
4:15 4:30	4	0.1%	16	0.3%					20	0.2%
4:30 4:45	4	0.1%	20	0.3%					24	0.2%
4:45 5:00	11	0.2%	32	0.5%					43	0.4%
4:00 5:00	20	0.3%	77	1.3%					97	0.8%
5:00 5:15	15	0.2%	40	0.7%					55	0.4%
5:15 5:30	12	0.2%	49	0.8%					61	0.5%
5:30 5:45	15	0.2%	57	1.0%					72	0.6%
5:45 6:00	18	0.3%	80	1.4%					98	0.8%
5:00 6:00	60	0.9%	226	3.9%					286	2.3%
6:00 6:15	20	0.3%	105	1.8%					125	1.0%
6:15 6:30	35	0.5%	110	1.9%					145	1.2%
6:30 6:45	43	0.7%	102	1.7%					145	1.2%
6:45 7:00	49	0.8%	130	2.2%					179	1.5%
6:00 7:00	147	2.3%	447	7.7%					594	4.8%
7:00 7:15	67	1.0%	100	1.7%					167	1.4%
7:15 7:30	60	0.9%	129	2.2%					189	1.5%
7:30 7:45	92	1.4%	120	2.1%					212	1.7%
7:45 8:00	88	1.4%	156	2.7%					244	2.0%
7:00 8:00	307	4.8%	505	8.6%					812	6.6%
8:00 8:15	74	1.2%	157	2.7%					231	1.9%
8:15 8:30	101	1.6%	140	2.4%					241	2.0%
8:30 8:45	104	1.6%	116	2.0%					220	1.8%
8:45 9:00	74	1.2%	94	1.6%					168	1.4%
8:00 9:00	353	5.5%	507	8.7%					860	7.0%
9:00 9:15	67	1.0%	102	1.7%					169	1.4%
9:15 9:30	55	0.9%	100	1.7%					155	1.3%
9:30 9:45	70	1.1%	90	1.5%					160	1.3%
9:45 10:00	67	1.0%	106	1.8%					173	1.4%
9:00 10:00	259	4.0%	398	6.8%					657	5.4%
10:00 10:15	65	1.0%	84	1.4%					149	1.2%
10:15 10:30	61	1.0%	92	1.6%					153	1.2%
10:30 10:45	72	1.1%	66	1.1%					138	1.1%
10:45 11:00	69	1.1%	79	1.4%					148	1.2%
10:00 11:00	267	4.2%	321	5.5%					588	4.8%
11:00 11:15	69	1.1%	84	1.4%					153	1.2%
11:15 11:30	64	1.0%	77	1.3%					141	1.2%
11:30 11:45	89	1.4%	72	1.2%					161	1.3%
11:45 12:00	81	1.3%	78	1.3%					159	1.3%
11:00 12:00	303	4.7%	311	5.3%					614	5.0%

12:00	12:15	67	1.0%	81	1.4%			148	1.2%
12:15	12:30	95	1.5%	59	1.0%			154	1.3%
12:30	12:45	87	1.4%	77	1.3%			164	1.3%
12:45	13:00	76	1.2%	77	1.3%			153	1.2%
12:00	13:00	325	5.1%	294	5.0%			619	5.0%
13:00	13:15	107	1.7%	75	1.3%			182	1.5%
13:15	13:30	81	1.3%	84	1.4%			165	1.3%
13:30	13:45	88	1.4%	69	1.2%			157	1.3%
13:45	14:00	99	1.5%	80	1.4%			179	1.5%
13:00	14:00	375	5.8%	308	5.3%			683	5.6%
14:00	14:15	94	1.5%	86	1.5%			180	1.5%
14:15	14:30	132	2.1%	74	1.3%			206	1.7%
14:30	14:45	113	1.8%	66	1.1%			179	1.5%
14:45	15:00	105	1.6%	85	1.5%			190	1.5%
14:00	15:00	444	6.9%	311	5.3%			755	6.2%
15:00	15:15	130	2.0%	79	1.4%			209	1.7%
15:15	15:30	161	2.5%	92	1.6%			253	2.1%
15:30	15:45	168	2.6%	87	1.5%			255	2.1%
15:45	16:00	139	2.2%	76	1.3%			215	1.8%
15:00	16:00	598	9.3%	334	5.7%			932	7.6%
16:00	16:15	153	2.4%	92	1.6%			245	2.0%
16:15	16:30	147	2.3%	95	1.6%			242	2.0%
16:30	16:45	152	2.4%	91	1.6%			243	2.0%
16:45	17:00	153	2.4%	112	1.9%			265	2.2%
16:00	17:00	605	9.4%	390	6.7%			995	8.1%
17:00	17:15	148	2.3%	83	1.4%			231	1.9%
17:15	17:30	132	2.1%	101	1.7%			233	1.9%
17:30	17:45	181	2.8%	88	1.5%			269	2.2%
17:45	18:00	115	1.8%	94	1.6%			209	1.7%
17:00	18:00	576	9.0%	366	6.3%			942	7.7%
18:00	18:15	125	1.9%	97	1.7%			222	1.8%
18:15	18:30	131	2.0%	103	1.8%			234	1.9%
18:30	18:45	101	1.6%	76	1.3%			177	1.4%
18:45	19:00	115	1.8%	64	1.1%			179	1.5%
18:00	19:00	472	7.4%	340	5.8%			812	6.6%
19:00	19:15	111	1.7%	70	1.2%			181	1.5%
19:15	19:30	95	1.5%	47	0.8%			142	1.2%
19:30	19:45	104	1.6%	46	0.8%			150	1.2%
19:45	20:00	96	1.5%	43	0.7%			139	1.1%
19:00	20:00	406	6.3%	206	3.5%			612	5.0%
20:00	20:15	94	1.5%	58	1.0%			152	1.2%
20:15	20:30	109	1.7%	42	0.7%			151	1.2%
20:30	20:45	73	1.1%	45	0.8%			118	1.0%
20:45	21:00	60	0.9%	34	0.6%			94	0.8%
20:00	21:00	336	5.2%	179	3.1%			515	4.2%
21:00	21:15	64	1.0%	29	0.5%			93	0.8%
21:15	21:30	71	1.1%	40	0.7%			111	0.9%
21:30	21:45	54	0.8%	32	0.5%			86	0.7%
21:45	22:00	38	0.6%	35	0.6%			73	0.6%
21:00	22:00	227	3.5%	136	2.3%			363	3.0%
22:00	22:15	51	0.8%	25	0.4%			76	0.6%
22:15	22:30	36	0.6%	28	0.5%			64	0.5%
22:30	22:45	39	0.6%	18	0.3%			57	0.5%
22:45	23:00	27	0.4%	21	0.4%			48	0.4%
22:00	23:00	153	2.4%	92	1.6%			245	2.0%
23:00	23:15	26	0.4%	11	0.2%			37	0.3%
23:15	23:30	22	0.3%	9	0.2%			31	0.3%
23:30	23:45	32	0.5%	8	0.1%			40	0.3%
23:45	00:00	12	0.2%	2	0.0%			14	0.1%
23:00	00:00	92	1.4%	30	0.5%			122	1.0%
Total		6417		5842				12259	100.0%
		52.3%		47.7%				100.0%	
AM PEAK		104		157				244	
period		8:30		8:00				7:45	
% of class		1.6%		2.7%				2.0%	
PM PEAK		181		112				269	
period		17:30		16:45				17:30	
% of class		2.8%		1.9%				2.2%	

APPENDIX C

ENVIRONMENTAL NOISE GUIDELINES

APPENDIX C
ENVIRONMENTAL NOISE GUIDELINES
MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PAKRS (MECP)

Reference: MECP Publication NPC-300, October 2013: “*Environmental Noise Guideline, Stationary and Transportation Source – Approval and Planning*”.

SPACE	SOURCE	TIME PERIOD	CRITERION
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	Road	23:00 to 07:00	45 dBA
	Rail	23:00 to 07:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Sleeping quarters	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 0
Sleeping quarters	Road	23:00 to 07:00	40 dBA
	Rail	23:00 to 07:00	35 dBA
	Aircraft	24-hour period	NEF/NEP 0
Outdoor Living Areas	Road and Rail	07:00 to 23:00	55 dBA
Outdoor Point of Reception	Aircraft	24-hour period	NEF/NEP 30 [#]
	Stationary Source		
	Class 1 Area	07:00 to 19:00 ⁽¹⁾	50 ⁺ dBA
		19:00 to 23:00 ⁽¹⁾	50 ⁺ dBA
	Class 2 Area	07:00 to 19:00 ⁽²⁾	50 ⁺ dBA
		19:00 to 23:00 ⁽²⁾	45 ⁺ dBA
	Class 3 Area	07:00 to 19:00 ⁽³⁾	45 ⁺ dBA
	19:00 to 23:00 ⁽³⁾	40 ⁺ dBA	
Class 4 Area	07:00 to 19:00 ⁽⁴⁾	55 ⁺ dBA	
	19:00 to 23:00 ⁽⁴⁾	55 ⁺ dBA	

..../cont'd

SPACE	SOURCE	TIME PERIOD	CRITERION
Plane of a Window of Noise Sensitive Spaces	Stationary Source Class 1 Area	07:00 to 19:00 ⁽¹⁾	50 ⁺ dBA
		19:00 to 23:00 ⁽¹⁾	50 ⁺ dBA
		23:00 to 07:00 ⁽¹⁾	45 ⁺ dBA
	Class 2 Area	07:00 to 19:00 ⁽²⁾	50 ⁺ dBA
		19:00 to 23:00 ⁽²⁾	50 ⁺ dBA
		23:00 to 07:00 ⁽²⁾	45 ⁺ dBA
	Class 3 Area	07:00 to 19:00 ⁽³⁾	45 ⁺ dBA
		19:00 to 23:00 ⁽³⁾	45 ⁺ dBA
		23:00 to 07:00 ⁽³⁾	40 ⁺ dBA
	Class 4 Area	07:00 to 19:00 ⁽⁴⁾	60 ⁺ dBA
		19:00 to 23:00 ⁽⁴⁾	60 ⁺ dBA
		23:00 to 07:00 ⁽⁴⁾	55 ⁺ dBA

- # may not apply to in-fill or re-development.
 * or the minimum hourly background sound exposure $L_{eq(1)}$, due to road traffic, if higher.
 (1) Class 1 Area: Urban.
 (2) Class 2 Area: Urban during day; rural-like evening and night.
 (3) Class 3 Area: Rural.
 (4) Class 4 Area: Subject to land use planning authority's approval.

Reference: MOE Publication ISBN 0-7729-2804-5, 1987: "Environmental Noise Assessment in Land-Use Planning".

EXCESS ABOVE RECOMMENDED SOUND LEVEL LIMITS (dBA)	CHANGE IN SUBJECTIVE LOUDNESS ABOVE	MAGNITUDE OF THE NOISE PROBLEM	NOISE CONTROL MEASURES (OR ACTION TO BE TAKEN)
No excess (<55 dBA)	—	No expected noise problem	None
1 to 5 inclusive (56 to 60 dBA)	Noticeably louder	Slight noise impact	If no physical measures are taken, then prospective purchasers or tenants should be made aware by suitable warning clauses.
6 to 10 inclusive (61 - 65 dBA)	Almost twice as loud	Definite noise impact	Recommended.
11 to 15 inclusive (66 - 70 dBA)	Almost three times as loud	Serious noise impact	Strongly Recommended.
16 and over (>70 dBA)	Almost four times as loud	Very serious noise impact	Strongly Recommended (may be mandatory).

APPENDIX D

SAMPLE CALCULATIONS –

TRANSPORTATION NOISE SOURCES

STAMSON 5.04 NORMAL REPORT Date: 14-03-2024 10:11:22
MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS / NOISE ASSESSMENT

Filename: a_sw_wf.te Time Period: Day/Night 16/8 hours
Description: **Building A Southwest Corner West Facade**

Road data, segment # 1: Hwy 50 (day/night)

Car traffic volume : 14211/1587 veh/TimePeriod
Medium truck volume : 270/28 veh/TimePeriod
Heavy truck volume : 99/5 veh/TimePeriod
Posted speed limit : 70 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Hwy 50 (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 23.00 / 25.00 m
Receiver height : 31.50 / 31.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

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

Car traffic volume : 8706/967 veh/TimePeriod *
Medium truck volume : 275/31 veh/TimePeriod *
Heavy truck volume : 183/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 8520
Percentage of Annual Growth : 2.00
Number of Years of Growth : 9.00
Medium Truck % of Total Volume : 3.00
Heavy Truck % of Total Volume : 2.00
Day (16 hrs) % of Total Volume : 90.00

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

Angle1 Angle2 : -90.00 deg 45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 23.00 / 23.00 m
Receiver height : 31.50 / 31.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hwy 50 (day)

Source height = 0.91 m

ROAD (0.00 + 65.65 + 0.00) = 65.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	67.51	0.00	-1.86	0.00	0.00	0.00	0.00	65.65

Segment Leq : 65.65 dBA

Results segment # 2: Columbia (day)

Source height = 1.19 m

ROAD (0.00 + 60.79 + 0.00) = 60.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	63.90	0.00	-1.86	-1.25	0.00	0.00	0.00	60.79

Segment Leq : 60.79 dBA

Total Leq All Segments: 66.88 dBA

Results segment # 1: Hwy 50 (night)

Source height = 0.75 m

ROAD (0.00 + 58.27 + 0.00) = 58.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	60.49	0.00	-2.22	0.00	0.00	0.00	0.00	58.27

Segment Leq : 58.27 dBA

Results segment # 2: Columbia (night)

Source height = 1.18 m

ROAD (0.00 + 54.24 + 0.00) = 54.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	57.34	0.00	-1.86	-1.25	0.00	0.00	0.00	54.24

Segment Leq : 54.24 dBA

Total Leq All Segments: 59.72 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.88
(NIGHT): 59.72

APPENDIX E

SAMPLE CALCULATIONS –

STATIONARY NOISE SOURCES

Point Sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height	Coordinates			
				Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm. dB(A)	Day dB(A)	Evening dB(A)	Night dB(A)	R		Area (m²)	Day (min)	Special (min)					Night (min)	X (m)	Y (m)	Z (m)
Truck Idling			MdTrk_Idle01	92.0	92.0	92.0	Lw	MdTrk_Idle			0.0	0.0	0.0			50.00	0.00	0.00	0.0	(none)	1.80	r	17599926.07	4860586.57	1.80
Truck Idling			DmpTrk_Idle01	100.6	100.6	100.6	Lw	Hvy_Trk_Idling			0.0	0.0	0.0			60.00	0.00	0.00	0.0	(none)	2.50	r	17599935.50	4860488.60	2.50

Line Sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
				Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm. dB(A)	Day dB(A)	Evening dB(A)	Night dB(A)	R		Area (m²)	Day (min)	Special (min)				Night (min)	(dB)	(Hz)	Day
Medium Truck Movements			MdTrk_Mvt01	91.4	-18.6	-18.6	66.9	-43.1	-43.1	PWL-Pt	Med_20kph		0.0	0.0	0.0				60.00	0.00	0.00	0.0	(none)	10.0	0.0	0.0	20.0
Lawnmower Movement to Trailer			LwnMwr_Mvt01	96.8	-16.2	-16.2	84.7	-28.3	-28.3	PWL-Pt	LM_01		0.0	0.0	0.0			-5	60.00	0.00	0.00	0.0	(none)	20.0	0.0	0.0	5.0
FEL loading aggregate			FEL01	106.0	106.0	106.0	85.9	85.9	85.9	Lw	FEL		0.0	0.0	0.0				60.00	0.00	0.00	0.0	(none)				
Dump Truck movement			DmpTrk_Mvt01	95.1	-12.7	-12.7	70.9	-36.9	-36.9	PWL-Pt	Hvy_Trk		0.0	0.0	0.0				60.00	0.00	0.00	0.0	(none)	6.0	0.0	0.0	20.0

Sound Level Library

Name	ID	Type	1/3 Oktave Spectrum (dB)											Source		
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A			lin
Medium truck movement - 20 kph	Med_20kph	Lw		0.0	111.3	105.2	99.6	96.4	94.3	91.5	87.2	82.5	99.9	112.7	VCL Database	
Medium Truck Idling	MdTrk_Idle	Lw		0.0	93.9	93.6	89.0	88.8	88.1	84.0	76.6	70.5	92.0	98.6	VCL Database	
Lawnmower Movement to Trailer	LM_01	Lw		84.8	112.2	105.9	95.7	95.9	97.4	97.7	96.2	91.0	103.7	113.6	VCL Measurement - 2021-06-25	
FEL	FEL	Lw		106.7	113.7	108.5	106.1	99.5	100.7	99.7	92.6	91.4	106.0	116.3	ML Measurements	
Heavy Truck Idling	Hvy_Trk_Idling	Lw		0.0	101.2	96.6	96.4	95.7	91.6	84.2	78.1	99.6	100.6	105.6	VCL database Heavy Truck Idle	
Heavy truck movement - 20 kph	Hvy_Trk	Lw		0.0	111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	115.3	VCL Database	

Receiver
 Name: Plane of Window - Level 10
 ID: POW01
 X: 17600043.54 m
 Y: 4860641.11 m
 Z: 31.50 m

Point Source, ISO 9613, Name: "Truck Idling", ID: "DmpTrk_Idle01"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
145	17599935.50	4860488.60	2.50	0	D	A	100.6	0.0	0.0	0.0	0.0	56.5	4.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	41.1
145	17599935.50	4860488.60	2.50	0	N	A	100.6	0.0	-188.0	0.0	0.0	56.5	4.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-146.9
145	17599935.50	4860488.60	2.50	0	E	A	100.6	0.0	-188.0	0.0	0.0	56.5	4.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-146.9

Line Source, ISO 9613, Name: "FEL loading aggregate", ID: "FEL01"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
149	17599917.15	4860473.51	3.50	0	D	A	85.9	12.9	0.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	42.1
149	17599917.15	4860473.51	3.50	0	N	A	85.9	12.9	-188.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-145.9
149	17599917.15	4860473.51	3.50	0	E	A	85.9	12.9	-188.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-145.9
172	17599931.05	4860497.96	3.50	0	D	A	85.9	10.1	0.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	40.0
172	17599931.05	4860497.96	3.50	0	N	A	85.9	10.1	-188.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	-148.0
172	17599931.05	4860497.96	3.50	0	E	A	85.9	10.1	-188.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	-148.0
196	17599926.49	4860483.72	3.50	0	D	A	85.9	9.1	0.0	0.0	0.0	56.9	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	38.6
196	17599926.49	4860483.72	3.50	0	N	A	85.9	9.1	-188.0	0.0	0.0	56.9	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-149.4
196	17599926.49	4860483.72	3.50	0	E	A	85.9	9.1	-188.0	0.0	0.0	56.9	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-149.4
200	17599923.86	4860468.51	3.50	0	D	A	85.9	9.4	0.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	38.7
200	17599923.86	4860468.51	3.50	0	N	A	85.9	9.4	-188.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-149.3
200	17599923.86	4860468.51	3.50	0	E	A	85.9	9.4	-188.0	0.0	0.0	57.5	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-149.3
209	17599925.36	4860476.29	3.50	0	D	A	85.9	8.5	0.0	0.0	0.0	57.2	1.3	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	38.0
209	17599925.36	4860476.29	3.50	0	N	A	85.9	8.5	-188.0	0.0	0.0	57.2	1.3	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	-150.0
209	17599925.36	4860476.29	3.50	0	E	A	85.9	8.5	-188.0	0.0	0.0	57.2	1.3	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	-150.0
212	17599927.24	4860494.13	3.50	0	D	A	85.9	7.9	0.0	0.0	0.0	56.6	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	37.7
212	17599927.24	4860494.13	3.50	0	N	A	85.9	7.9	-188.0	0.0	0.0	56.6	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	-150.3
212	17599927.24	4860494.13	3.50	0	E	A	85.9	7.9	-188.0	0.0	0.0	56.6	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	-150.3
217	17599914.46	4860467.77	3.50	0	D	A	85.9	9.0	0.0	0.0	0.0	57.8	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	38.0
217	17599914.46	4860467.77	3.50	0	N	A	85.9	9.0	-188.0	0.0	0.0	57.8	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-150.0
217	17599914.46	4860467.77	3.50	0	E	A	85.9	9.0	-188.0	0.0	0.0	57.8	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-150.0
221	17599928.29	4860499.88	3.50	0	D	A	85.9	7.5	0.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	37.4
221	17599928.29	4860499.88	3.50	0	N	A	85.9	7.5	-188.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	-150.6
221	17599928.29	4860499.88	3.50	0	E	A	85.9	7.5	-188.0	0.0	0.0	56.3	1.2	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	-150.6
264	17599920.82	4860466.71	3.50	0	D	A	85.9	8.7	0.0	0.0	0.0	57.7	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	37.8
264	17599920.82	4860466.71	3.50	0	N	A	85.9	8.7	-188.0	0.0	0.0	57.7	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-150.2
264	17599920.82	4860466.71	3.50	0	E	A	85.9	8.7	-188.0	0.0	0.0	57.7	1.3	-2.1	0.0	0.0	0.0	0.0	0.0	0.0	-150.2
268	17599924.90	4860483.29	3.50	0	D	A	85.9	7.6	0.0	0.0	0.0	57.0	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	37.1
268	17599924.90	4860483.29	3.50	0	N	A	85.9	7.6	-188.0	0.0	0.0	57.0	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-150.9
268	17599924.90	4860483.29	3.50	0	E	A	85.9	7.6	-188.0	0.0	0.0	57.0	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-150.9
272	17599926.55	4860488.37	3.50	0	D	A	85.9	7.4	0.0	0.0	0.0	56.8	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	37.0
272	17599926.55	4860488.37	3.50	0	N	A	85.9	7.4	-188.0	0.0	0.0	56.8	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	-151.0
272	17599926.55	4860488.37	3.50	0	E	A	85.9	7.4	-188.0	0.0	0.0	56.8	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	-151.0
276	17599928.01	4860489.86	3.50	0	D	A	85.9	7.1	0.0	0.0	0.0	56.7	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	36.9
276	17599928.01	4860489.86	3.50	0	N	A	85.9	7.1	-188.0	0.0	0.0	56.7	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	-151.1
276	17599928.01	4860489.86	3.50	0	E	A	85.9	7.1	-188.0	0.0	0.0	56.7	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	-151.1
281	17599931.34	4860492.65	3.50	0	D	A	85.9	5.9	0.0	0.0	0.0	56.5	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	35.8
281	17599931.34	4860492.65	3.50	0	N	A	85.9	5.9	-188.0	0.0	0.0	56.5	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	-152.2
281	17599931.34	4860492.65	3.50	0	E	A	85.9	5.9	-188.0	0.0	0.0	56.5	1.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	-152.2

Line Source, ISO 9613, Name: "Lawnmower Movement to Trailer", ID: "LwnMwr_Mvt01"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)	
153	17599919.55	4860591.61	1.50	0	D	A	84.7	7.4	0.0	0.0	0.0	53.7	1.6	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	38.0
153	17599919.55	4860591.61	1.50	0	N	A	-28.3	7.4	-188.0	0.0	0.0	53.7	1.6	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	-263.0
153	17599919.55	4860591.61	1.50	0	E	A	-28.3	7.4	-188.0	0.0	0.0	53.7	1.6	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	-263.0

Line Source, ISO 9613, Name: "Dump Truck movement", ID: "DmpTrk_Mvt01"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
407	17599993.48	4860546.55	2.50	1	N	A	-36.9	9.4	-188.0	0.0	0.0	52.6	0.9	-0.8	0.0	0.0	0.0	0.0	2.4	-270.6
407	17599993.48	4860546.55	2.50	1	E	A	-36.9	9.4	-188.0	0.0	0.0	52.6	0.9	-0.8	0.0	0.0	0.0	0.0	2.4	-270.6
411	17600001.47	4860547.40	2.50	0	D	A	70.9	8.9	0.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	28.4
411	17600001.47	4860547.40	2.50	0	N	A	-36.9	8.9	-188.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	-267.3
411	17600001.47	4860547.40	2.50	0	E	A	-36.9	8.9	-188.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	-267.3
413	17600001.47	4860547.40	2.50	1	D	A	70.9	8.9	0.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	25.1
413	17600001.47	4860547.40	2.50	1	N	A	-36.9	8.9	-188.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	-270.7
413	17600001.47	4860547.40	2.50	1	E	A	-36.9	8.9	-188.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	-270.7
416	17600004.49	4860548.62	2.50	1	D	A	70.9	1.2	0.0	0.0	0.0	59.8	1.6	-1.8	0.0	0.0	23.2	0.0	2.4	-13.1
416	17600004.49	4860548.62	2.50	1	N	A	-36.9	1.2	-188.0	0.0	0.0	59.8	1.6	-1.8	0.0	0.0	23.2	0.0	2.4	-308.9
416	17600004.49	4860548.62	2.50	1	E	A	-36.9	1.2	-188.0	0.0	0.0	59.8	1.6	-1.8	0.0	0.0	23.2	0.0	2.4	-308.9
419	17599942.66	4860505.87	2.50	0	D	A	70.9	12.9	0.0	0.0	0.0	55.7	1.1	-1.3	0.0	0.0	0.0	0.0	0.0	28.3
419	17599942.66	4860505.87	2.50	0	N	A	-36.9	12.9	-188.0	0.0	0.0	55.7	1.1	-1.3	0.0	0.0	0.0	0.0	0.0	-267.5
419	17599942.66	4860505.87	2.50	0	E	A	-36.9	12.9	-188.0	0.0	0.0	55.7	1.1	-1.3	0.0	0.0	0.0	0.0	0.0	-267.5
422	17600001.22	4860547.27	2.50	0	D	A	70.9	8.6	0.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	28.1
422	17600001.22	4860547.27	2.50	0	N	A	-36.9	8.6	-188.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	-267.7
422	17600001.22	4860547.27	2.50	0	E	A	-36.9	8.6	-188.0	0.0	0.0	51.6	0.8	-1.0	0.0	0.0	0.0	0.0	0.0	-267.7
424	17600001.22	4860547.27	2.50	1	D	A	70.9	8.6	0.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	24.7
424	17600001.22	4860547.27	2.50	1	N	A	-36.9	8.6	-188.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	-271.0
424	17600001.22	4860547.27	2.50	1	E	A	-36.9	8.6	-188.0	0.0	0.0	52.4	0.8	-0.9	0.0	0.0	0.0	0.0	2.4	-271.0
427	17599969.73	4860557.96	2.50	0	D	A	70.9	8.6	0.0	0.0	0.0	52.2	0.8	-0.7	0.0	0.0	0.0	0.0	0.0	27.1
427	17599969.73	4860557.96	2.50	0	N	A	-36.9	8.6	-188.0	0.0	0.0	52.2	0.8	-0.7	0.0	0.0	0.0	0.0	0.0	-268.7
427	17599969.73	4860557.96	2.50	0	E	A	-36.9	8.6	-188.0	0.0	0.0	52.2	0.8	-0.7	0.0	0.0	0.0	0.0	0.0	-268.7
431	17599985.95	4860548.76	2.50	0	D	A	70.9	8.5	0.0	0.0	0.0	52.0	0.8	-0.6	0.0	0.0	0.0	0.0	0.0	27.2
431	17599985.95	4860548.76	2.50	0	N	A	-36.9	8.5	-188.0	0.0	0.0	52.0	0.8	-0.6	0.0	0.0	0.0	0.0	0.0	-268.6
431	17599985.95	4860548.76	2.50	0	E	A	-36.9	8.5	-188.0	0.0	0.0	52.0	0.8	-0.6	0.0	0.0	0.0	0.0	0.0	-268.6
434	17599985.12	4860549.18	2.50	1	D	A	70.9	4.7	0.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.9	19.8
434	17599985.12	4860549.18	2.50	1	N	A	-36.9	4.7	-188.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.9	-275.9
434	17599985.12	4860549.18	2.50	1	E	A	-36.9	4.7	-188.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.9	-275.9
436	17599987.74	4860547.86	2.50	1	D	A	70.9	4.7	0.0	0.0	0.0	52.6	0.9	-0.6	0.0	0.0	0.0	0.0	2.4	20.3
436	17599987.74	4860547.86	2.50	1	N	A	-36.9	4.7	-188.0	0.0	0.0	52.6	0.9	-0.6	0.0	0.0	0.0	0.0	2.4	-275.5
436	17599987.74	4860547.86	2.50	1	E	A	-36.9	4.7	-188.0	0.0	0.0	52.6	0.9	-0.6	0.0	0.0	0.0	0.0	2.4	-275.5
439	17599989.09	4860547.18	2.50	1	D	A	70.9	-11.9	0.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.4	3.8
439	17599989.09	4860547.18	2.50	1	N	A	-36.9	-11.9	-188.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.4	-292.0
439	17599989.09	4860547.18	2.50	1	E	A	-36.9	-11.9	-188.0	0.0	0.0	52.6	0.9	-0.7	0.0	0.0	0.0	0.0	2.4	-292.0
504	17599949.16	4860518.15	2.50	0	D	A	70.9	9.3	0.0	0.0	0.0	55.0	1.1	-0.8	0.0	0.0	0.0	0.0	0.0	24.9
504	17599949.16	4860518.15	2.50	0	N	A	-36.9	9.3	-188.0	0.0	0.0	55.0	1.1	-0.8	0.0	0.0	0.0	0.0	0.0	-270.8
504	17599949.16	4860518.15	2.50	0	E	A	-36.9	9.3	-188.0	0.0	0.0	55.0	1.1	-0.8	0.0	0.0	0.0	0.0	0.0	-270.8
542	17599936.58	4860493.39	2.50	0	D	A	70.9	9.3	0.0	0.0	0.0	56.3	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	24.4
542	17599936.58	4860493.39	2.50	0	N	A	-36.9	9.3	-188.0	0.0	0.0	56.3	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	-271.4
542	17599936.58	4860493.39	2.50	0	E	A	-36.9	9.3	-188.0	0.0	0.0	56.3	1.2	-1.7	0.0	0.0	0.0	0.0	0.0	-271.4
570	17599945.45	4860482.25	2.50	0	D	A	70.9	9.3	0.0	0.0	0.0	56.5	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	24.4
570	17599945.45	4860482.25	2.50	0	N	A	-36.9	9.3	-188.0	0.0	0.0	56.5	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	-271.3
570	17599945.45	4860482.25	2.50	0	E	A	-36.9	9.3	-188.0	0.0	0.0	56.5	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	-271.3
622	17599936.26	4860486.81	2.50	0	D	A	70.9	7.2	0.0	0.0	0.0	56.6	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	22.2
622	17599936.26	4860486.81	2.50	0	N	A	-36.9	7.2	-188.0	0.0	0.0	56.6	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	-273.6
622	17599936.26	4860486.81	2.50	0	E	A	-36.9	7.2	-188.0	0.0	0.0	56.6	1.2	-1.8	0.0	0.0	0.0	0.0	0.0	-273.6
626	17599939.26	4860482.73	2.50	0	D	A	70.9	7.3	0.0	0.0	0.0	56.7	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	22.3
626	17599939.26	4860482.73	2.50	0	N	A	-36.9	7.3	-188.0	0.0	0.0	56.7	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	-273.5
626	17599939.26	4860482.73	2.50	0	E	A	-36.9	7.3	-188.0	0.0	0.0	56.7	1.2	-2.0	0.0	0.0	0.0	0.0	0.0	-273.5
651	17600011.22	4860552.77	2.50	0	D	A	70.9	-2.1	0.0	0.0	0.0	50.9	0.7	-1.8	0.0	0.0	0.0	0.0	0.0	19.0
651	17600011.22	4860552.77	2.50	0	N	A	-36.9	-2.1	-188.0	0.0	0.0	50.9	0.7	-1.8	0.0	0.0	0.0	0.0	0.0	-276.8
651	17600011.22	4860552.77	2.50	0	E	A	-36.9	-2.1	-188.0	0.0	0.0	50.9	0.7	-1.8	0.0	0.0	0.0	0.0	0.0	-276.8
655	17600011.22	4860552.77	2.50	1	D	A	70.9	-2.1	0.0	0.0	0.0	51.9	0.8	-1.5	0.0	0.0	0.0	0.0	2.1	15.6
655	17600011.22	4860552.77	2.50	1	N	A	-36.9	-2.1	-188.0	0.0	0.0	51.9	0.8	-1.5	0.0	0.0	0.0	0.0	2.1	-280.2
655	17600011.22	4860552.77	2.50	1	E	A	-36.9	-2.1	-188.0	0.0	0.0	51.9	0.8	-1.5	0.0	0.0	0.0	0.0	2.1	-280.2
657	17600011.22	4860552.77	2.50	1	D	A	70.9	-2.1	0.0	0.0	0.0	59.6	1.5	-1.6	0.0	0.0	23.1	0.0	2.4	-16.2
657	17600011.22	4860552.77	2.50	1	N	A	-36.9	-2.1	-188.0	0.0	0.0	59.6	1.5	-1.6	0.0	0.0	23.1	0.0	2.4	-312.0
657	17600011.22	4860552.77	2.50	1	E	A	-36.9	-2.1	-188.0	0.0	0.0	59.6	1.5	-1.6	0.0	0.0	23.1	0.0	2.4	-312.0

Line Source, ISO 9613, Name: "Medium Truck Movements", ID: "MdTrk_Mvt01"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
595	17599913.65	4860597.71	1.80	1	D	A	66.9	-13.0	0.0	0.0	0.0	54.4	0.8	-1.1	0.0	0.0	15.5	0.0	2.8	-18.4
595	17599913.65	4860597.71	1.80	1	N	A	-43.1	-13.0	-188.0	0.0	0.0	54.4	0.8	-1.1	0.0	0.0	15.5	0.0	2.8	-316.4
595	17599913.65	4860597.71	1.80	1	E	A	-43.1	-13.0	-188.0	0.0	0.0	54.4	0.8	-1.1	0.0	0.0	15.5	0.0	2.8	-316.4
598	17599908.19	4860520.71	1.80	0	D	A	66.9	11.7	0.0	0.0	0.0	56.3	0.9	-2.6	0.0	0.0	0.0	0.0	0.0	23.9
598	17599908.19	4860520.71	1.80	0	N	A	-43.1	11.7	-188.0	0.0	0.0	56.3	0.9	-2.6	0.0	0.0	0.0	0.0	0.0	-274.1
598	17599908.19	4860520.71	1.80	0	E	A	-43.1	11.7	-188.0	0.0	0.0	56.3	0.9	-2.6	0.0	0.0	0.0	0.0	0.0	-274.1
604	17599941.35	4860565.08	1.80	0	D	A	66.9	8.7	0.0	0.0	0.0	53.3	0.7	-0.9	0.0	0.0	0.0	0.0	0.0	22.5
604	17599941.35	4860565.08	1.80	0	N	A	-43.1	8.7	-188.0	0.0	0.0	53.3	0.7	-0.9	0.0	0.0	0.0	0.0	0.0	-275.5
604	17599941.35	4860565.08	1.80	0	E	A	-43.1	8.7	-188.0	0.0	0.0	53.3	0.7	-0.9	0.0	0.0	0.0	0.0	0.0	-275.5
608	17599939.91	4860562.41	1.80	1	D	A	66.9	1.3	0.0	0.0	0.0	60.8	1.4	-1.3	0.0	0.0	21.7	0.0	3.2	-17.6
608	17599939.91	4860562.41	1.80	1	N	A	-43.1	1.3	-188.0	0.0	0.0	60.8	1.4	-1.3	0.0	0.0	21.7	0.0	3.2	-315.6
608	17599939.91	4860562.41	1.80	1	E	A	-43.1	1.3	-188.0	0.0	0.0	60.8	1.4	-1.3	0.0	0.0	21.7	0.0	3.2	-315.6
613	17599943.77	4860571.44	1.80	0	D	A	66.9	8.0	0.0	0.0	0.0	53.0	0.7	-0.6	0.0	0.0	0.0	0.0	0.0	21.9
613	17599943.77	4860571.44	1.80	0	N	A	-43.1	8.0	-188.0	0.0	0.0	53.0	0.7	-0.6	0.0	0.0	0.0	0.0	0.0	-276.1
613	17599943.77	4860571.44	1.80	0	E	A	-43.1	8.0	-188.0	0.0	0.0	53.0	0.7	-0.6	0.0	0.0	0.0	0.0	0.0	-276.1
618	17599937.29	4860559.26	1.80	0	D	A	66.9	8.4	0.0	0.0	0.0	53.8	0.7	-1.4	0.0	0.0	0.0	0.0	0.0	22.2
618	17599937.29	4860559.26	1.80	0	N	A	-43.1	8.4	-188.0	0.0	0.0	53.8	0.7	-1.4	0.0	0.0	0.0	0.0	0.0	-275.8
618	17599937.29	4860559.26	1.80	0	E	A	-43.1	8.4	-188.0	0.0	0.0	53.8	0.7	-1.4	0.0	0.0	0.0	0.0	0.0	-275.8
630	17599913.15	4860613.65	1.80	0	D	A	66.9	6.5	0.0	0.0	0.0	53.7	0.7	-0.1	0.0	0.0	10.7	0.0	0.0	8.4
630	17599913.15	4860613.65	1.80	0	N	A	-43.1	6.5	-188.0	0.0	0.0	53.7	0.7	-0.1	0.0	0.0	10.7	0.0	0.0	-289.6
630	17599913.15	4860613.65	1.80	0	E	A	-43.1	6.5	-188.0	0.0	0.0	53.7	0.7	-0.1	0.0	0.0	10.7	0.0	0.0	-289.6
633	17599914.61	4860612.84	1.80	1	D	A	66.9	0.5	0.0	0.0	0.0	55.2	0.8	-1.8	0.0	0.0	16.1	0.0	4.7	-7.7
633	17599914.61	4860612.84	1.80	1	N	A	-43.1	0.5	-188.0	0.0	0.0	55.2	0.8	-1.8	0.0	0.0	16.1	0.0	4.7	-305.7
633	17599914.61	4860612.84	1.80	1	E	A	-43.1	0.5	-188.0	0.0	0.0	55.2	0.8	-1.8	0.0	0.0	16.1	0.0	4.7	-305.7
634	17599912.67	4860613.92	1.80	1	D	A	66.9	5.2	0.0	0.0	0.0	55.3	0.8	-1.8	0.0	0.0	16.3	0.0	4.9	-3.4
634	17599912.67	4860613.92	1.80	1	N	A	-43.1	5.2	-188.0	0.0	0.0	55.3	0.8	-1.8	0.0	0.0	16.3	0.0	4.9	-301.4
634	17599912.67	4860613.92	1.80	1	E	A	-43.1	5.2	-188.0	0.0	0.0	55.3	0.8	-1.8	0.0	0.0	16.3	0.0	4.9	-301.4
637	17599909.08	4860614.02	1.80	0	D	A	66.9	6.5	0.0	0.0	0.0	53.9	0.7	-0.3	0.0	0.0	10.9	0.0	0.0	8.1
637	17599909.08	4860614.02	1.80	0	N	A	-43.1	6.5	-188.0	0.0	0.0	53.9	0.7	-0.3	0.0	0.0	10.9	0.0	0.0	-289.9
637	17599909.08	4860614.02	1.80	0	E	A	-43.1	6.5	-188.0	0.0	0.0	53.9	0.7	-0.3	0.0	0.0	10.9	0.0	0.0	-289.9
640	17599910.31	4860614.43	1.80	1	D	A	66.9	2.8	0.0	0.0	0.0	55.2	0.8	-1.7	0.0	0.0	16.5	0.0	5.1	-6.2
640	17599910.31	4860614.43	1.80	1	N	A	-43.1	2.8	-188.0	0.0	0.0	55.2	0.8	-1.7	0.0	0.0	16.5	0.0	5.1	-304.2
640	17599910.31	4860614.43	1.80	1	E	A	-43.1	2.8	-188.0	0.0	0.0	55.2	0.8	-1.7	0.0	0.0	16.5	0.0	5.1	-304.2
643	17599908.85	4860613.94	1.80	1	D	A	66.9	0.7	0.0	0.0	0.0	55.2	0.8	-1.6	0.0	0.0	16.6	0.0	5.1	-8.5
643	17599908.85	4860613.94	1.80	1	N	A	-43.1	0.7	-188.0	0.0	0.0	55.2	0.8	-1.6	0.0	0.0	16.6	0.0	5.1	-306.5
643	17599908.85	4860613.94	1.80	1	E	A	-43.1	0.7	-188.0	0.0	0.0	55.2	0.8	-1.6	0.0	0.0	16.6	0.0	5.1	-306.5
645	17599905.65	4860611.68	1.80	0	D	A	66.9	6.2	0.0	0.0	0.0	54.2	0.8	-0.5	0.0	0.0	10.6	0.0	0.0	8.1
645	17599905.65	4860611.68	1.80	0	N	A	-43.1	6.2	-188.0	0.0	0.0	54.2	0.8	-0.5	0.0	0.0	10.6	0.0	0.0	-289.9
645	17599905.65	4860611.68	1.80	0	E	A	-43.1	6.2	-188.0	0.0	0.0	54.2	0.8	-0.5	0.0	0.0	10.6	0.0	0.0	-289.9
648	17599904.57	4860608.08	1.80	0	D	A	66.9	6.0	0.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	9.8	0.0	0.0	8.7
648	17599904.57	4860608.08	1.80	0	N	A	-43.1	6.0	-188.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	9.8	0.0	0.0	-289.3
648	17599904.57	4860608.08	1.80	0	E	A	-43.1	6.0	-188.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	9.8	0.0	0.0	-289.3
659	17599905.69	4860604.82	1.80	0	D	A	66.9	5.0	0.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	8.9	0.0	0.0	8.7
659	17599905.69	4860604.82	1.80	0	N	A	-43.1	5.0	-188.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	8.9	0.0	0.0	-289.3
659	17599905.69	4860604.82	1.80	0	E	A	-43.1	5.0	-188.0	0.0	0.0	54.3	0.8	-0.7	0.0	0.0	8.9	0.0	0.0	-289.3
661	17599906.21	4860604.10	1.80	1	D	A	66.9	1.5	0.0	0.0	0.0	54.6	0.8	-1.1	0.0	0.0	16.5	0.0	3.0	-5.5
661	17599906.21	4860604.10	1.80	1	N	A	-43.1	1.5	-188.0	0.0	0.0	54.6	0.8	-1.1	0.0	0.0	16.5	0.0	3.0	-303.5
661	17599906.21	4860604.10	1.80	1	E	A	-43.1	1.5	-188.0	0.0	0.0	54.6	0.8	-1.1	0.0	0.0	16.5	0.0	3.0	-303.5