

Noise Feasibility Study

Proposed Mosque

1456 Bronte Street South

Milton, Ontario

Prepared for:

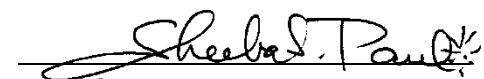
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June 20, 2023

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Figure 1: Key Plan

Figure 2: Proposed Site Plan Showing Prediction Locations

Figure 3: Boyne Survey Secondary Plan Phase III West Tertiary Plan

Figure 4: Drawing Showing Rooftop Units and Receptor Locations

Figure 5: Predicted Daytime Sound Level Contours at 4.5 m Height, dBA

Figure 6: Predicted Nighttime Sound Level Contours at 4.5 m Height, dBA

Appendix A: Supporting Drawings

Appendix B: Road Traffic Data

Appendix C: Rail Traffic Data

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1 Introduction and Summary

Howe Gastmeier Chapnik Limited (HGC Engineering) was retained by Ahmadiyya Muslim Ja'amat Canada Inc. to investigate the potential environmental noise impact of the proposed Mosque at 1456 Bronte Street South in the Town of Milton, Ontario. The impact of road traffic noise on the proposed Mosque and the impact of the building on nearby existing and future residences were evaluated. A noise study is required by the Town of Milton, as part of the planning and approvals process, specifically in support of a Zoning by-law amendment and Site Plan application.

This report has been updated to include the latest site plan dated June 2, 2023, prepared by Paradigm Architecture + Design and includes updated traffic data.

Road traffic information for Bronte Street South was obtained from the road network assessment conducted by GHD. Rail traffic data was obtained from HGC Engineering files for past projects in the area and originally obtained from Canadian National (CN) personnel. The data was used to predict future traffic sound levels at the proposed Mosque. The predicted sound levels were compared to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP).

The results of this study indicate that with suitable noise control measures integrated into the design of the Mosque, it is feasible to achieve the indoor MECP guideline sound levels from road and rail traffic noise sources. The recommended noise control measures include air conditioning systems, and any exterior wall and double-glazed window construction meeting the minimum requirements of the Ontario Building Code (OBC).

An analysis was also conducted to determine the potential impact of noise from the proposed Mosque on adjacent sensitive receptors consisting of existing and future residences. The analysis is based on a review of the proposed site plan, secondary plan of the area, assumed sound data for outdoor mechanical units, a site visit and aerial photos. The analysis includes an assessment of the noise impact of the anticipated roof top mechanical equipment at the closest sensitive receptors in accordance with MECP guidelines.

A computer model of the area was created, using acoustic modelling software, in order to predict the sound levels at the locations of nearby sensitive receptors. The results indicate that the sound



emissions of the building will be within the applicable noise guideline limits of the MECP with an acoustic screen extending 0.3 m above two rooftop units.

2 Site Description and Sources of Sound

The proposed mosque is to be built at 1456 Bronte Street South in the Town of Milton, Ontario. Figure 1 represents a key plan of the area. Figure 2 shows the proposed site plan prepared by Paradigm Architecture + Design dated June 2, 2023. The proposed Mosque will consist of a one storey building with parking areas. Appendix A includes preliminary floor plans and building elevations.

2.1 Site Description

Currently, the subject site contains one residential building which will be removed. The surrounding lands are currently existing and future residential lands as shown in the preliminary Boyne Survey Secondary Plan shown in Figure 3. A secondary school is located to the north of the subject site.

The road adjacent to the site is Bronte Road South as shown in Figure 1. Bronte Road South is a four-lane roadway (two lanes in each direction). Since the surrounding lands are proposed to be residential and institutional, it will be evaluated as a Class 1 (urban) acoustical environment where the background sound is primarily made up of the sounds of road traffic and human activity (the urban hum).

The dominant noise source that will impact the proposed Mosque is road traffic on Bronte Road South. Rail traffic on the CN railway to the west is a secondary source of noise. There were no other major sources of noise evident within 500 metres of the site.

3 Assessment of Traffic Noise on the Proposed Building

3.1 Road Traffic Noise Criteria

Guidelines for acceptable levels of road and rail traffic noise are given in the MECP publication, NPC-300, “Environmental Noise Guideline Stationary and Transportation Sources – Approval and



Planning”, release date October 21, 2013. Road traffic noise criteria are listed in Table I below. The values in Table I are energy average equivalent sound levels [L_{EQ}] in units of A-weighted decibels [dBA].

Table I: MECP Road and Rail Traffic Noise Criteria (dBA)

Area	Daytime L _{EQ} (16 hour) Road/Rail	Nighttime L _{EQ} (8 hour) Road/Rail
Inside living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, libraries, individual or semiprivate offices, conference rooms, reading rooms, etc.	45 dBA / 40 dBA	--

Central air conditioning is a requirement under MECP guidelines where daytime sound levels outside office or commercial windows exceed 65 dBA. Sound attenuating building constructions are required when daytime sound levels exceed 65 dBA due to road traffic noise and 60 dBA for rail traffic noise.

3.2 Traffic Noise Assessment

3.2.1 Road Traffic Data

Projected road traffic volumes for Bronte Road South were obtained from a road network assessment conducted by GHD last revised September 2017 provided by the Town of Milton and the Region of Halton personnel, also included in Appendix B, in the form of 2026 peak projected peak hour volumes. The data was projected to the year 2033 with a 2.5%/year growth rate. A daytime commercial vehicle percentage of 5.2% was split into 2.0% medium trucks and 3.2% heavy trucks was used in the analysis. A day/night split of 90%/10% and a posted speed limit of 60 kph were used in the analysis. Table II summarized the traffic data used in the analysis.

Table II: 2033 Projected Road Traffic Data

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Bronte Road South	Daytime	26 219	839	894	27 952
	Nighttime	2 913	93	99	3 105
	Total	29 132	932	993	31 057

3.2.2 Rail Traffic Data

Rail traffic data for typical operations of the CN Oakville Subdivision were obtained from HGC Engineering past project files in the area, originally obtained from CN, and is included in Appendix C. The Oakville Subdivision is used for freight operations only and is a principal mainline. The maximum train speed of 80 kph (50 mph) for freight was used in the analysis. In conformance with CN assessment requirements, these maximum speeds, number of cars and maximum locomotives per train were used in the traffic noise analysis to yield a worst case estimate of train noise. The data was projected to the year 2033 using a 2.5% per year growth rate. Table III summarises the rail traffic data used in the analysis.

Table III: Rail Traffic Data Projected to the Year 2033

Type of Train	Number of Trains Day/ Night	Number of locomotives	Number of cars	Max Speed (KPH)
Freight	12.8 / 5.1	4	140	80
Way Freight	2.6 / 0.0	4	25	80

3.2.3 Traffic Noise Predictions

To assess the levels of road and rail traffic noise which will impact the site in the future, predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix D.

Predictions of the traffic sound levels were made at representative locations around the proposed Mosque. The building envelope indicated on the site plan was used in the analysis. The results of

these predictions are summarized in Table IV. The acoustic recommendations will be subject to modifications if the orientation of the proposed Mosque or site layout is changed significantly.

Table IV: Future Traffic Sound Levels, Without Mitigation [dBA]

Prediction Location	Description	Daytime – at Façade (L _{EQ-16hr})	
		Road	Rail
A	Northeast façade of Mosque with exposure to Bronte St S	59	<55
B	Northwest façade with some exposure to Bronte St S and the railway	56	<55
C	Southwest façade of Mosque with exposure to railway	<55	<55

3.3 Discussion and Recommendations

3.3.1 Outdoor Living Areas

There are no outdoor living areas associated with the proposed mosque.

3.3.2 Ventilation Requirements

The predicted sound levels at the Mosque will be between 56 and 65 dBA during the daytime hours and between 51 and 60 dBA during the nighttime hours. To address these excesses, the MECP guidelines recommend that the building be equipped with an alternative means of ventilation to open windows. Air conditioning meets and exceeds this requirement.

3.3.3 Building Envelope Constructions

The sound levels at the façade of the proposed Mosque are predicted to be less than 60 dBA during the night and less than 65 dBA during the day. Any exterior wall, and double-glazed window construction meeting the minimum requirements of the OBC will provide adequate sound insulation for the dwelling units.

3.4 Warning Clauses

The Town of Milton typically requires the following noise warning clauses to be included in every agreement of purchase and sale for the lands.

(I.) Tenants and purchasers are advised that noise levels due to increasing road and rail traffic from Bronte Road South and the railway may continue to be of concern, occasionally interfering with some activities of the occupants, as the noise exposure levels may exceed the noise criteria of the Municipality and the Ministry of the Environment, Conservation and Parks.

This sample clause is provided by the MECP as an example and can be modified by the Municipality as required.

4 Assessment of Commercial (Stationary) Sources of Sound on the Adjacent Sensitive Receptors

The building's hours of operation were not known at the time of this report, but are likely to be inclusive of day and evening hours every day. There are no residences proposed within the mosque.

The rooftop HVAC units have not been selected for the building, but reasonable assumptions based on past projects of a similar nature were used in the analysis. Sound levels have been taken from manufacturer's product specifications.

4.1 Noise Source Description

The primary sources of sound associated with the building are the rooftop equipment. Typical sound levels associated with tonnages of the equipment were obtained from HGC Engineering project files and originally from the manufacturer. Sensitive receptor locations were taken at the most potentially impacted residences, which are the existing residences to the northeast (R1 to R3), and a future residence (R4) to the south. The 3-storey Elise MacGill Secondary School to the north was included as R5 as they do have some operable windows. These locations are shown in Figure 4.

4.2 Criteria for Acceptable Sound Levels

4.2.1 Stationary Noise Criteria

In Ontario, the guidelines of the Ontario MECP form the basis of environmental noise assessment. MECP publication NPC-300, *Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning*”, release date October 21, 2013 provides criteria for assessing the noise



impact of this commercial facility. The term Stationary Source is used to designate all noise sources at the site including mechanical equipment, conveyances, such as trucks when they are moving within the site boundaries. The MECP guidelines assess the noise impact of fluctuating sounds on an hourly energy equivalent (average) sound level basis, rather than on short-duration maximum sound levels. Hourly equivalent sound levels are denoted as the L_{EQ-1hr} .

The criteria are based on the background sound level at sensitive points of reception (which are typically residences) in the quietest hour that the source can be in operation. Background sound includes sound from road traffic and natural sounds, but excludes the sources under assessment. For relatively quiet areas where background sound may fall to low levels during some hours, NPC-300 stipulates various minimum limits. In class 1 areas, these limits are 50 dBA for daytime (07:00 to 23:00) and 45 dBA at night (23:00 to 07:00).

The MECP guidelines stipulate that the sound level impact during a “predicable worst-case hour” be considered. This is defined to be an hour when a typically busy “planned and predictable mode of operation” occurs at the subject facility coincident with a period of minimal background sound.

The decision to include the sound from trucks in an assessment under MECP noise guidelines depends on the volume of trucking, and the nature of the facility. Occasional deliveries to retail stores and convenience stores are exempt, for example, but heavy trucking at a warehouse or busy shipping/receiving docks at an industry must generally be assessed. The likely activities at the proposed Mosque may include the occasional movement of customer vehicles on the property and garbage collection and are not of themselves considered to be significant noise sources in the MECP guidelines. It is not expected that there will be tractor trailer truck traffic or refrigerated trucks associated with the proposed Mosque and these have not been included in the analysis.

4.2.2 Sound Level Criteria at the Sensitive Receptors

The MECP guidelines stipulate that the sound level impact during a “predicable worst-case hour” be considered. This is defined to be an hour when a typically busy “planned and predictable mode of operation” occurs at the subject facility, coincident with a period of minimal background sound. Compliance with MECP criteria generally results in acceptable levels of sound at residential receptors although there may still be residual audibility during periods of low background sound.



Typical ambient sound levels can be determined through prediction of road traffic volumes in areas where traffic sound is dominant. Where it can be demonstrated that the hourly ambient sound levels are greater than the exclusionary minimum limits listed above, the criterion becomes the lowest predicted one-hour L_{EQ} sound level during each respective period. At locations where the ambient sound levels are low, the exclusionary minimum criteria of 50/45 dBA apply.

Table V: Predicted Minimum Hourly Sound Levels and Noise Level Criteria at Receptors [dBA]

Receptor	Day	Night
R1 (Existing 2-storey dwellings to the northeast)	50	45
R2 (Existing 2-storey dwellings to the northeast)	50	45
R3 (Existing 2-storey dwellings to the northeast)	50	45
R4 (Future 2-storey dwellings to the south)	50	45
R5 (3-Storey Elise MacGill Secondary School)	50	--

In each case, the limits apply at any point on the property, and at residential window locations.

4.4 Stationary Source Assessment

Predictive noise modelling was used to assess the potential sound impact of rooftop equipment at the closest sensitive receptors. The noise prediction model was based on sound emission levels for rooftop equipment, assumed operational profiles (during the day and night), and established engineering methods for the prediction of outdoor sound propagation. These methods include the effects of distance, air absorption, and acoustical screening by barrier obstacles.

There is expected to be no significant noise sources associated with the proposed Mosque beyond the rooftop mechanical equipment (i.e. deliveries, if any, would be sporadic, light and during daytime hours only). Conservatively, three units are assumed to be located on the rooftop. Table VI below summarizes the sound data for the rooftop HVAC units.

Table VI: Manufacturer’s Sound Power Levels for Mechanical Equipment [dB re 10-12 W]

Source	Octave Band Centre Frequency [Hz]							
	63	125	250	500	1k	2k	4k	8k
Lennox, 5 Ton (A-Weighted)	--	67	72	77	76	73	68	61
Lennox, 12.5 Ton (A-Weighted)	--	77	80	85	84	79	74	66

The above outlined sound levels and site features were used as input to a predictive computer model. The software used for this purpose (*Cadna-A Version 2022 MR2 193.5260*) is a computer implementation of ISO Standard 9613-2.2 “Acoustics - Attenuation of Sound During Propagation Outdoors.” The ISO method accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures such as barriers.

The following information and assumptions were used in the analysis.

- The height of the proposed Mosque is 9.9 m as shown in the elevation drawings.
- R1 to R3 are existing 2-storey residences on the north side of Bronte Street. R4 is a future 2-storey semi-detached residence. The receptor height for 2-storey residential dwellings was assumed to be 4.5 m above grade. R5 is the existing 3-storey school to the north (Elise MacGill Secondary School).
- The rooftop units were assumed to be located as shown in Figure 4. The rooftop equipment were assumed to be Lennox models and all were assumed to be 1.3 m high (4.3 ft). Sound data for the models was obtained from the manufacturer. Based on the size of the spaces, it is conservatively assumed that two 12.5-ton units and one 5-ton unit may be used.

In this impact assessment, we have considered typical worst-case (busiest hour) scenarios for each time period to be as follows:

Assumed day worst-case scenario:

- All rooftop equipment operating continuously at full capacity;

Assumed night worst-case scenario:

- All rooftop equipment operating on a 50% duty cycle;

4.5 Results

The calculations consider the acoustical effects of distance and shielding by the buildings. The sound levels due to the rooftop mechanical equipment at the closest neighbouring existing and future residences (R1 to R4) are summarized in the following table.

Table VII: Predicted Sound Levels from the Proposed Mosque at the Sensitive Receptors [dBA]

Receptor	Criteria (OLA/Day /Night)	OLA	Day	Night
R2 (Existing 2-storey dwellings to the northeast)	50/50/45	<30	31	<30
R2 (Existing 2-storey dwellings to the northeast)	50/50/45	<30	31	<30
R3 (Existing 2-storey dwellings to the northeast)	50/50/45	<30	32	<30
R4 (Future 2-storey dwelling to the south)	50/50/45	47	50	47
R5 (Elise MacGill Secondary School)	--/50/--	--	41	--

These results indicate that sound levels under a worst-case operational scenario from the rooftop mechanical equipment associated with the mosque may exceed the criteria by up to 2 dBA at the second storey windows of R4 during the night. Recommendations are provided in the following section.

4.6 Recommended Noise Mitigation Measures

Feasible means exist to reduce sound levels from the rooftop mechanical equipment from the Mosque to meet MECP criteria. In order to meet the applicable sound level limits, the HVAC units should be selected for a maximum sound power level of 87 dBA (for the assumed 12.5 ton units). With the above mitigation measures implemented for the HVAC units, sound levels can be reduced to within MECP criteria for all of the sensitive receptors. Figures 5 and 6 shows the predicted sound level contours from the proposed building at a height of 4.5 m with the appropriate unit selections.

Further Analysis

When the final details of the HVAC equipment are known (including make, model, sound data, etc.), a revised analysis should be performed to verify sound levels at all off-site residential (sensitive) receptors.

4.7 Recommendations

In summary, HGC Engineering has predicted the sound levels near the proposed site; reviewed the proposed site plan and typical sound rating data for the HVAC units; and performed calculations to determine the impact at the sensitive receptors with respect to MECP guidelines. The proposed Mosque can achieve MECP guidelines, as long as the following are met.

- 1) When final roof plans and mechanical equipment selections are available for the proposed Mosque, an acoustical engineer should verify the equipment selections, construction of the acoustic screen, that the source sound level specifications and locations for the HVAC units conform to the assumptions made in this report and that acceptable sound levels will result at all offsite residential receptors. Use of larger and louder rooftop equipment may result in the requirement for additional rooftop acoustic screens.
- 2) After construction, the municipal building inspector or a Professional Engineer qualified to perform acoustical engineering services in the Province of Ontario should certify that the selected rooftop units are in place.

5 Conclusions and Recommendations

In summary, HGC Engineering has reviewed the site plan, obtained typical sound rating data for HVAC units and performed calculations to determine the potential noise impact at the sensitive receptor locations with respect to MECP guidelines.

Our analysis, assuming typical worst-case equipment and operating scenarios as described in Section 4, indicates that the noise impact of the building complies with MECP criteria at the nearest sensitive receptor locations with units selected with the maximum sound power level described



above. The reader is referred to previous sections of this report where the recommendations are discussed in detail.



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Figure 1 - Key Plan

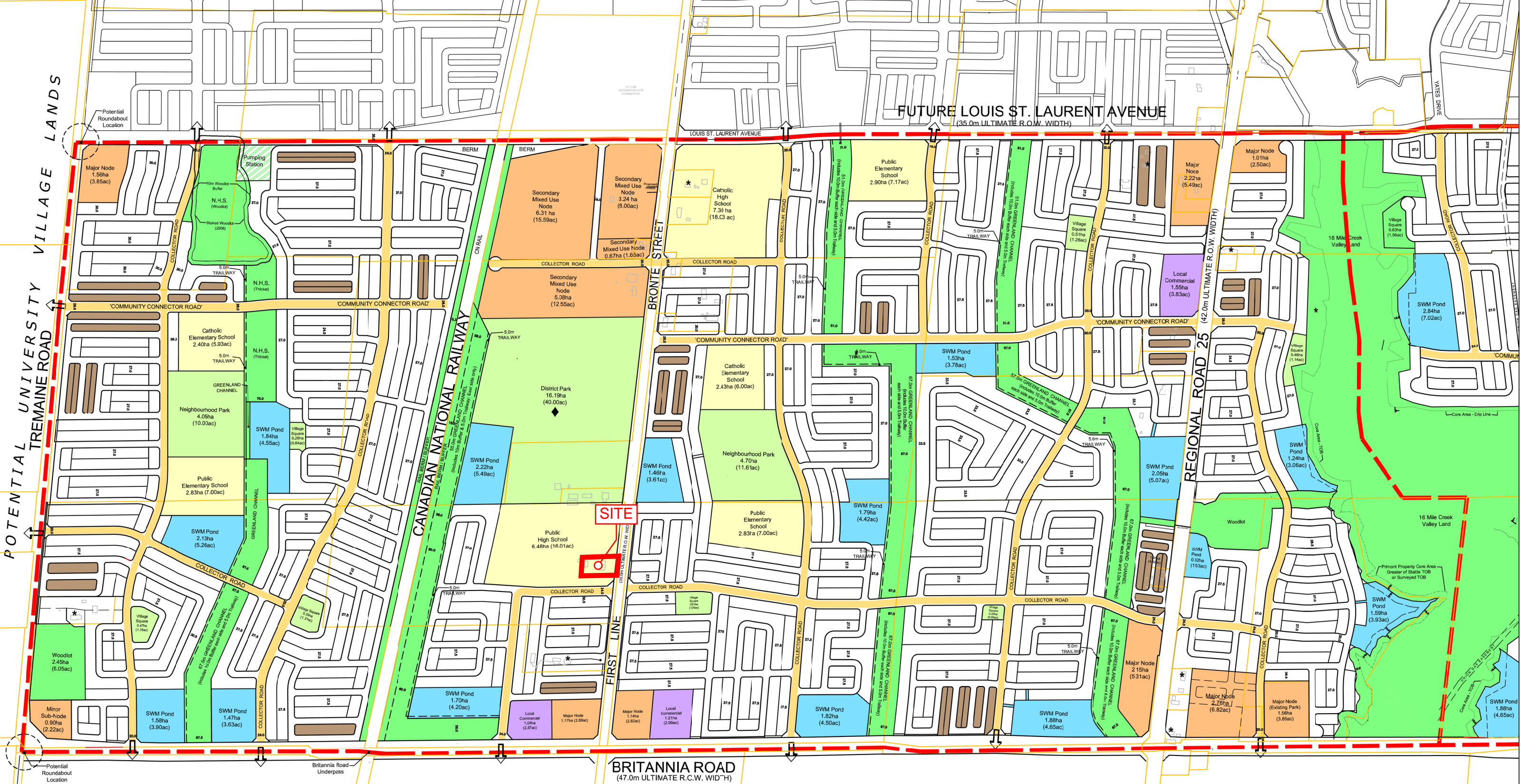


Figure 3 - Boyne Survey Secondary Plan Phase III West Tertiary Plan


BOYNE SURVEY SECONDARY PLAN PHASE III WEST TERTIARY PLAN

- *Potential Heritage Structure (Subject to H.I.A.)
- ◆ The Parkland in the Boyne Secondary Plan is under OMB appeal, and as such, the location and shape of this District Park is conceptual.
- The Right-of-way of Collector roads will be confirmed at SIS Approval stage.

"Draft for Discussion Purposes Only
WITHOUT PREJUDICE"

SCALE 1:4000
JANUARY 15, 2014

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Figure 4: Drawing Showing Rooftop Units and Receptor Locations

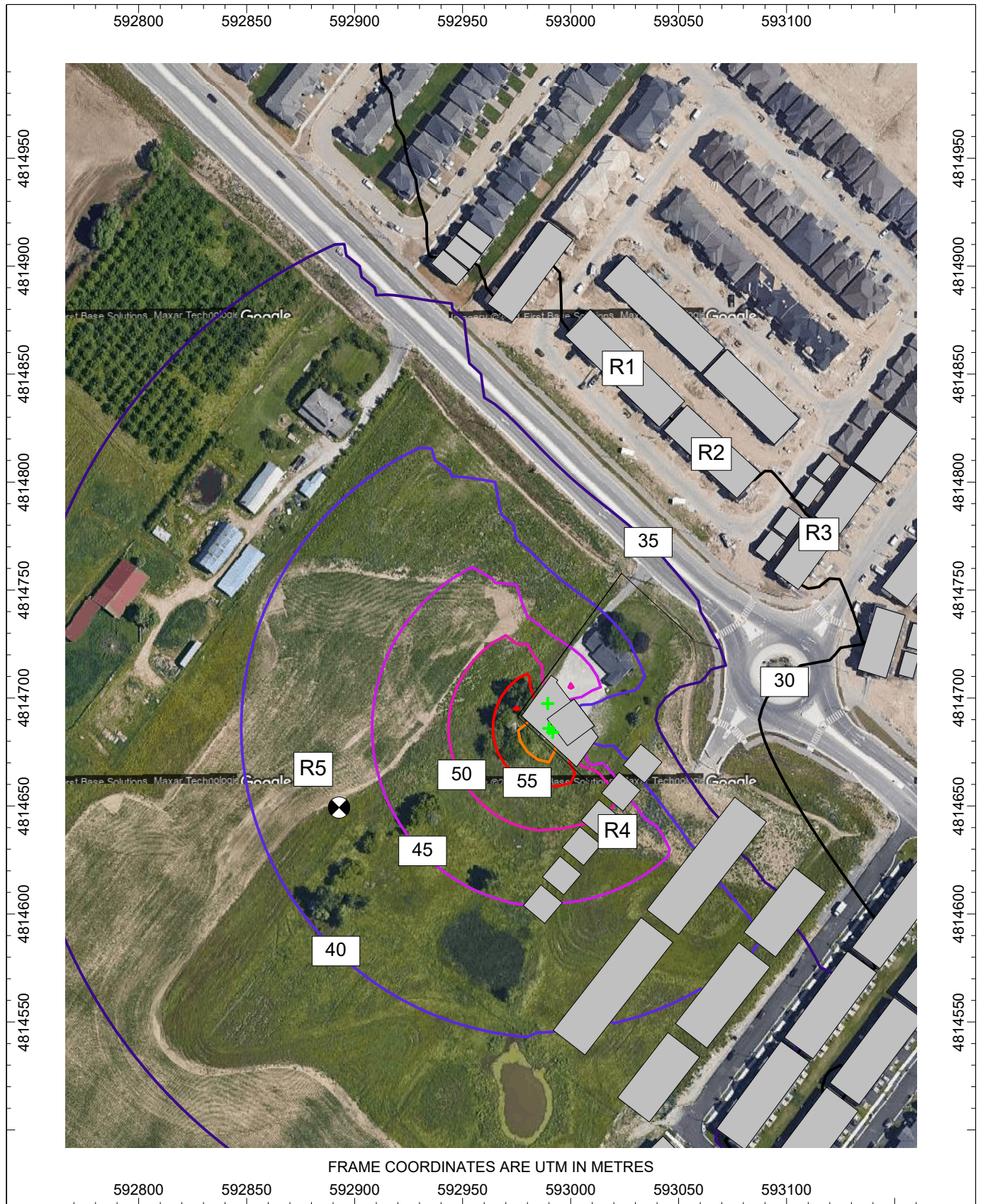


Figure 5: Predicted Daytime Sound Level Contours at 4.5 m Height, dBA

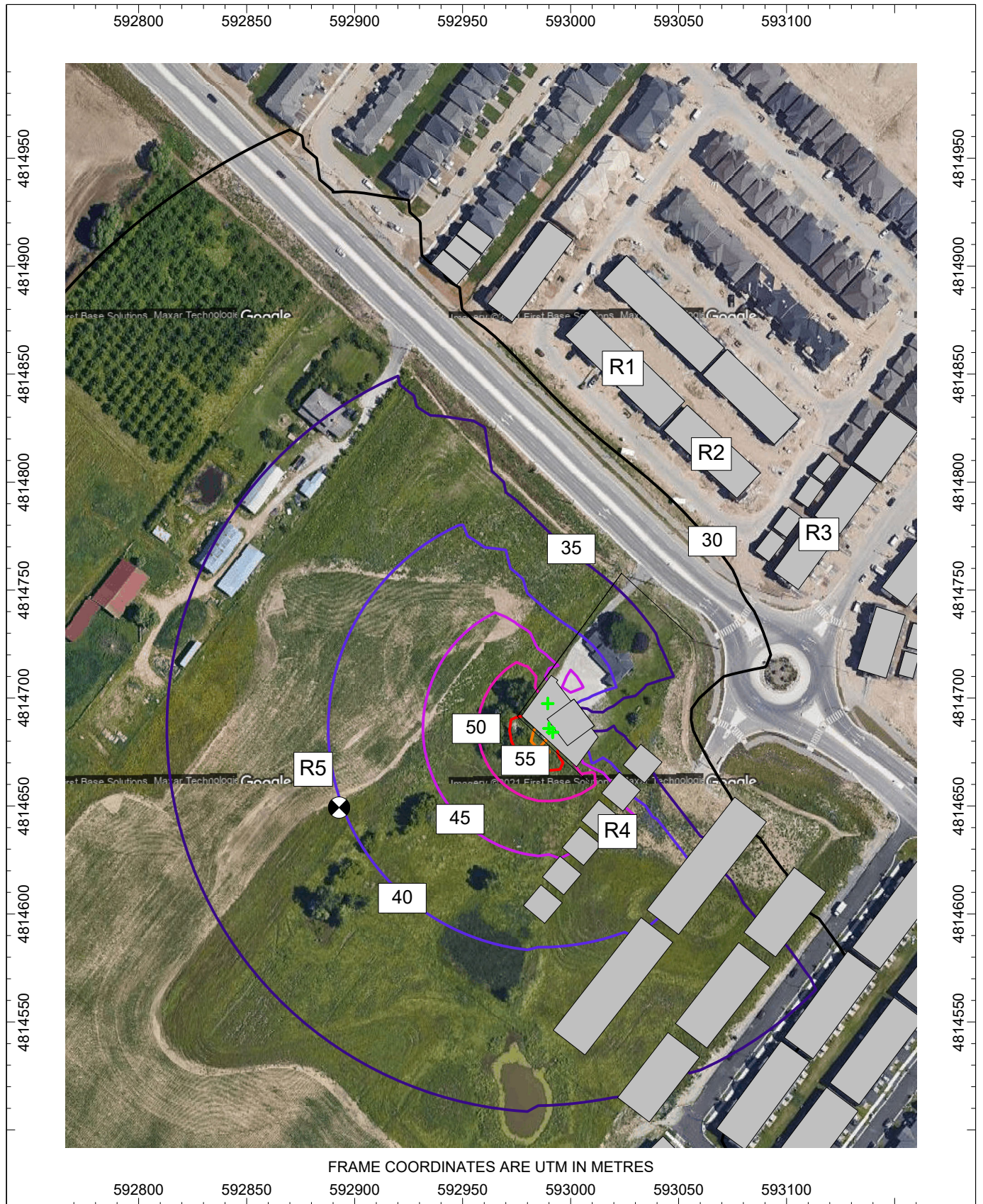


Figure 6: Predicted Nighttime Sound Level Contours at 4.5 m Height, dBA

APPENDIX A

Supporting Drawings



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OBC STATISTICS

MAJOR OCCUPANCY CLASSIFICATION [TABLE 3.1.2.1.]
 ASSEMBLY OCCUPANCY - GROUP A, DIVISION 3

BUILDING CLASSIFICATION [3.2.2.29]
 GROUP A, DIVISION 3, ANY HEIGHT, ANY AREA

BUILDING AREA [1.4.12] (I think the clause number is wrong)
 EXISTING 0.00m² + NEW 757.0m² = 757.0m²

NUMBER OF STOREYS [3.2.1.1]
 ABOVE GRADE= 1 STOREY
 BELOW GRADE= 1 STOREY

NUMBER OF STREETS / FIRE FIGHTER ACCESS [3.2.2.10 & 3.2.5]
 FACING 2 STREETS

SPRINKLER SYSTEM REQUIRED [3.2.2.42]
 YES, FULLY SPRINKLERED

STANDPIPE REQUIRED [3.2.9]
 YES

FIRE ALARM SYSTEM REQUIRED [3.2.4]
 YES

ADEQUATE WATER SERVICE SUPPLY [3.2.5.7]
 YES

HIGH BUILDING [3.2.6]
 NO

PERMITTED CONSTRUCTION [3.2.2.20-3.2.2.83]
 NON-COMBUSTIBLE
 ACTUAL CONSTRUCTION
 NON-COMBUSTIBLE

MEZZANINE AREAS [3.2.1.1(3)-3.2.1.1(6)]
 TOTAL = 0.0m²

OCCUPANT LOAD [3.1.16]
 BASEMENT [A3]: 648.0m²/0.75= 834 PERSONS
 GROUND FLOOR [A3]: 634.0m²/0.75= 846 PERSONS
 TOTAL = 1,710 PERSONS

BARRIER FREE DESIGN [3.8]
 YES

HAZARDOUS SUBSTANCES [3.3.1.2 & 3.3.1.19]
 NO

ZONING STATISTICS

1458 BRONTE ST S, MILTON, ON L9E 0J5
 ZONING DISTRICT: PART OF LOT 6, CONCESSION 1 (TRAFALGAR), TOWN OF MILTON IN THE REGIONAL MUNICIPALITY OF HALTON
 RANTHAVEN CAVAN INC. (TOWN FILE: 2-1014)
 WARD 4
 TOTAL LOT AREA: 3810.050 m² (0.38 ha)

GFA	EXISTING	REQUIRED	PROPOSED
BUILDING	252.43 m²		1,445m² + 54m² (STORAGE) + 7m² (MECH.)
TOTAL			1,516m²

SETBACKS	EXISTING	REQUIRED
EAST SETBACK (FRONT)	3.00 m	53.50m
SOUTH SETBACK	1.50 m	9.00m
WEST SETBACK	1.50 m	1.50m
NORTH SETBACK	1.50 m	1.50m
BUILDING HEIGHT		9.9 M

FLOOR SPACE INDEX	EXISTING	REQUIRED
REQUIRED/PERMITTED ± 1.0 (MAX)	252.43 m²/3810.05 m² ± 0.07	1,516 m²/3810.05 m² ± 0.40

LOT COVERAGE	EXISTING	REQUIRED
LOT FRONTAGE	45.72 M	
LOT AREA	3810.05 m²	NO CHANGE
BUILDING	143.005 m²	757.0m²
TOTAL LOT COVERAGE	252.43 m² + 143.005 m² = 395.435 m² (2.87%)	757.0 m² ± (19.8%)

LANDSCAPE	EXISTING	REQUIRED
LANDSCAPE OPEN SPACE %		15.1% (576.0/3810.05)*100
LANDSCAPE BUFFER		3.00 m (STREET)

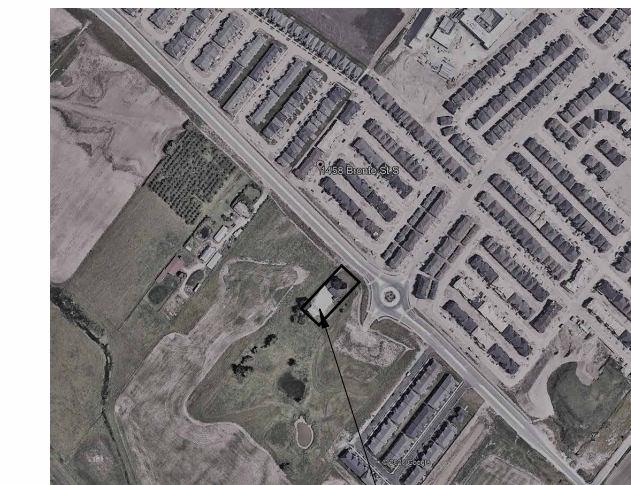
PARKING / LOADING SPACES	EXISTING	REQUIRED
PRAYER HALL	0	44 SPACES
MULTI-PURPOSE ROOM	0	26 SPACES
TOTAL PARKING SPACES	0	70 SPACES

MILTON AMJ COMMUNITY CENTRE
 1458 BRONTE STREET SOUTH, MILTON, ON L9T 7K4

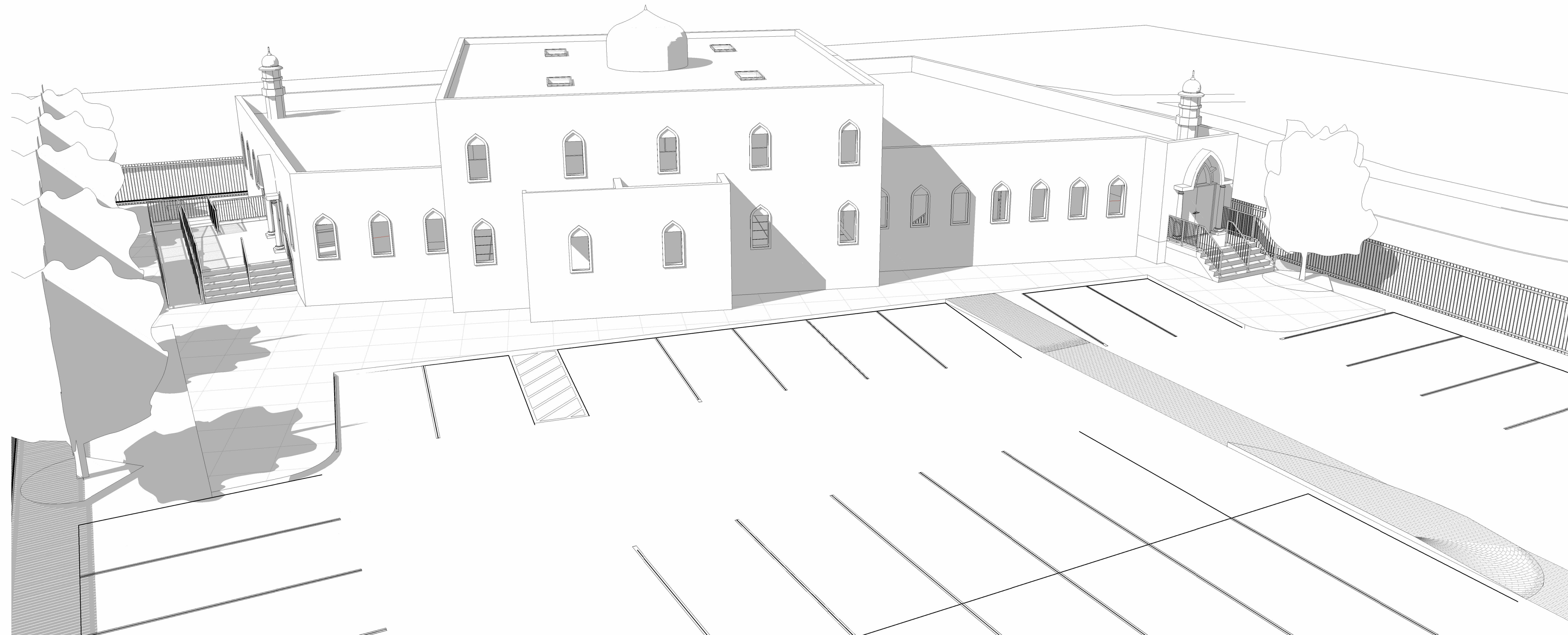
ISSUED FOR REVIEW
 JUNE 06, 2023

DRAWING LIST

SHEET NO.	SHEET NAME
A0.0	PROJECT INFORMATION
A1.0	SITE PLAN
A1.1	FLOOR PLANS AND SECTION
A2.0	ELEVATIONS
A3.1	BUILDING SECTION
A4.1	3D VIEWS



1458 BRONTE STREET SOUTH, MILTON, ON L9T 7K4
LOCATION MAP



1 FRONT VIEW
 SCALE:

NO.	DATE	DESCRIPTION
1	2023/03/02	ISSUED FOR COORDINATION

NO.	DATE	DESCRIPTION
1	2023/03/02	REVISION TO BLDG LOCATION

NO.	DATE	DESCRIPTION

REVISION

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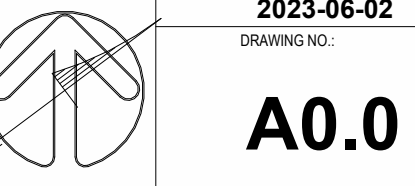
STAMP:

PROJECT NAME LOCATION
MILTON AMJ COMMUNITY CENTRE

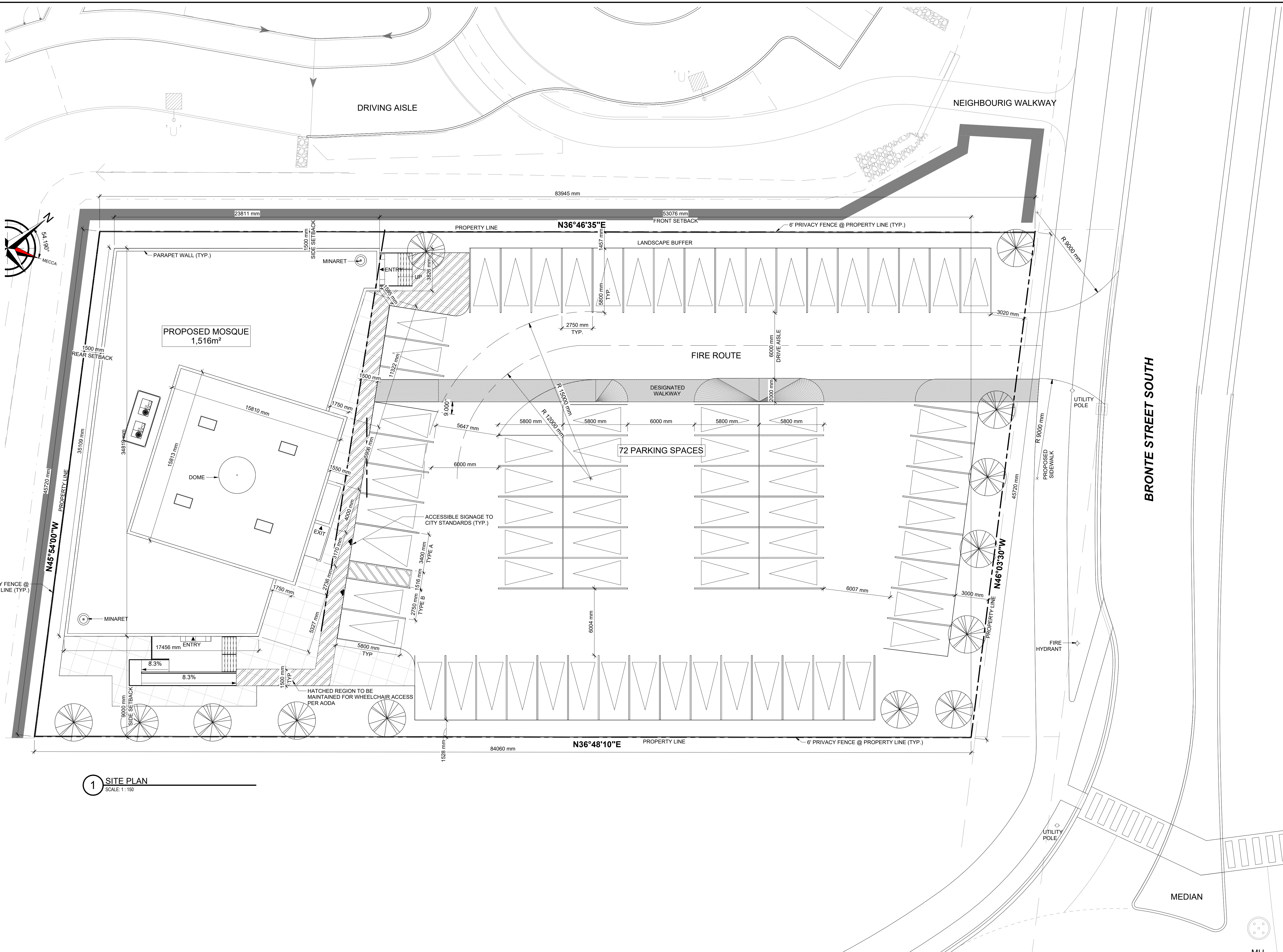
1458 BRONTE STREET SOUTH, MILTON

DRAWING TITLE
PROJECT INFORMATION

DRAWN BY: MM/MC	PROJECT NO.: 856
CHECKED BY: MC	SCALE: As indicated
	DATE: 2023-06-02
	DRAWING NO.: A0.0



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1 SITE PLAN
SCALE: 1:150

NO.	DATE	DESCRIPTION
1	2023/03/02	ISSUED FOR COORDINATION

NO.	DATE	DESCRIPTION
1	2023/03/02	REVISION TO BLDG LOCATION

REVISION

DISCLAIMER:
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PROJECT NAME/LOCATION
MILTON AMJ COMMUNITY CENTRE

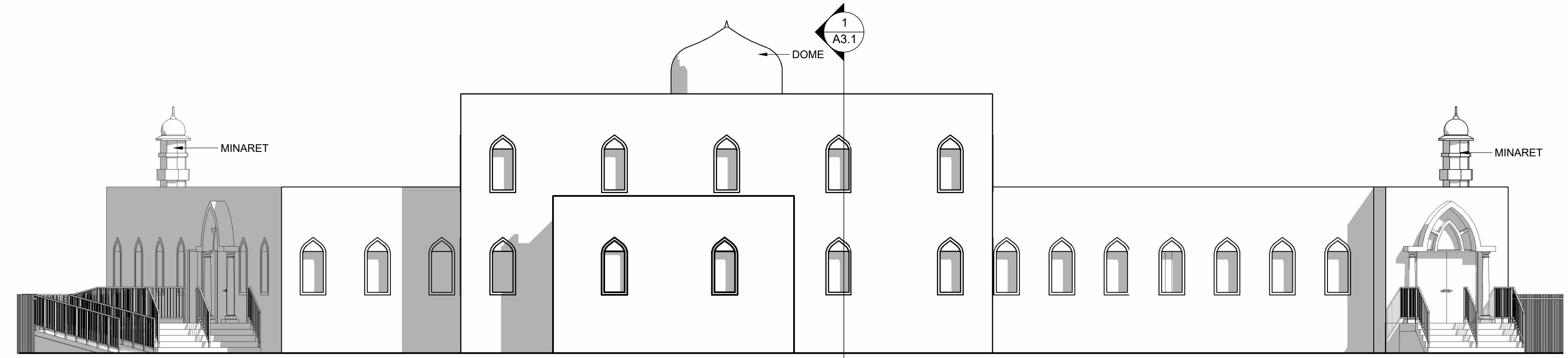
1458 BRONTE STREET SOUTH, MILTON

DRAWING TITLE
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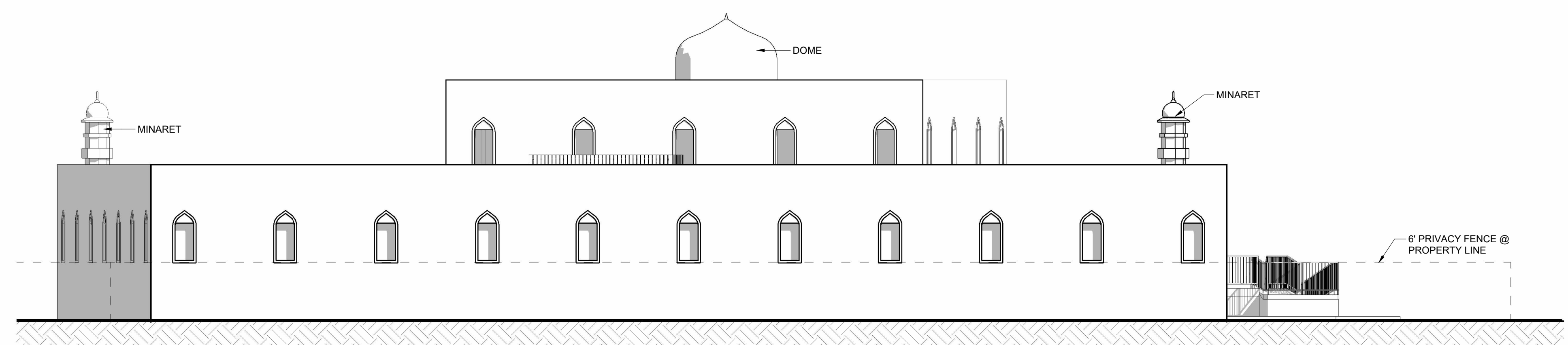
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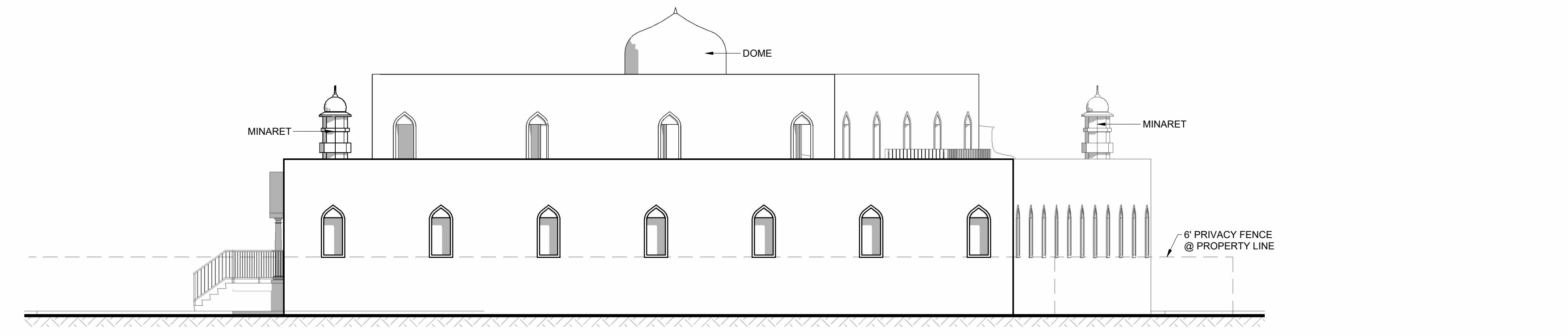
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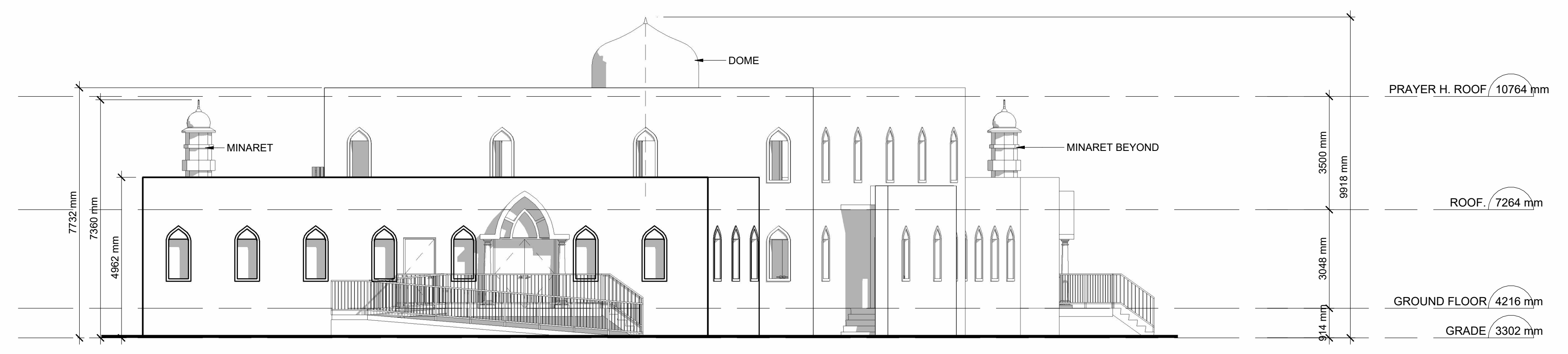
ACCESSIBILITY RAMP
1 EAST ELEVATION
 SCALE: 1:100



2 WEST ELEVATION
 SCALE: 1:100



3 NORTH ELEVATION
 SCALE: 1:100



4 SOUTH ELEVATION
 SCALE: 1:100

ISSUE		
NO.	DATE	DESCRIPTION
1	2023/03/02	ISSUED FOR COORDINATION

REVISION		
NO.	DATE	DESCRIPTION
1	2023/03/02	REVISION TO BLDG LOCATION

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STAMP

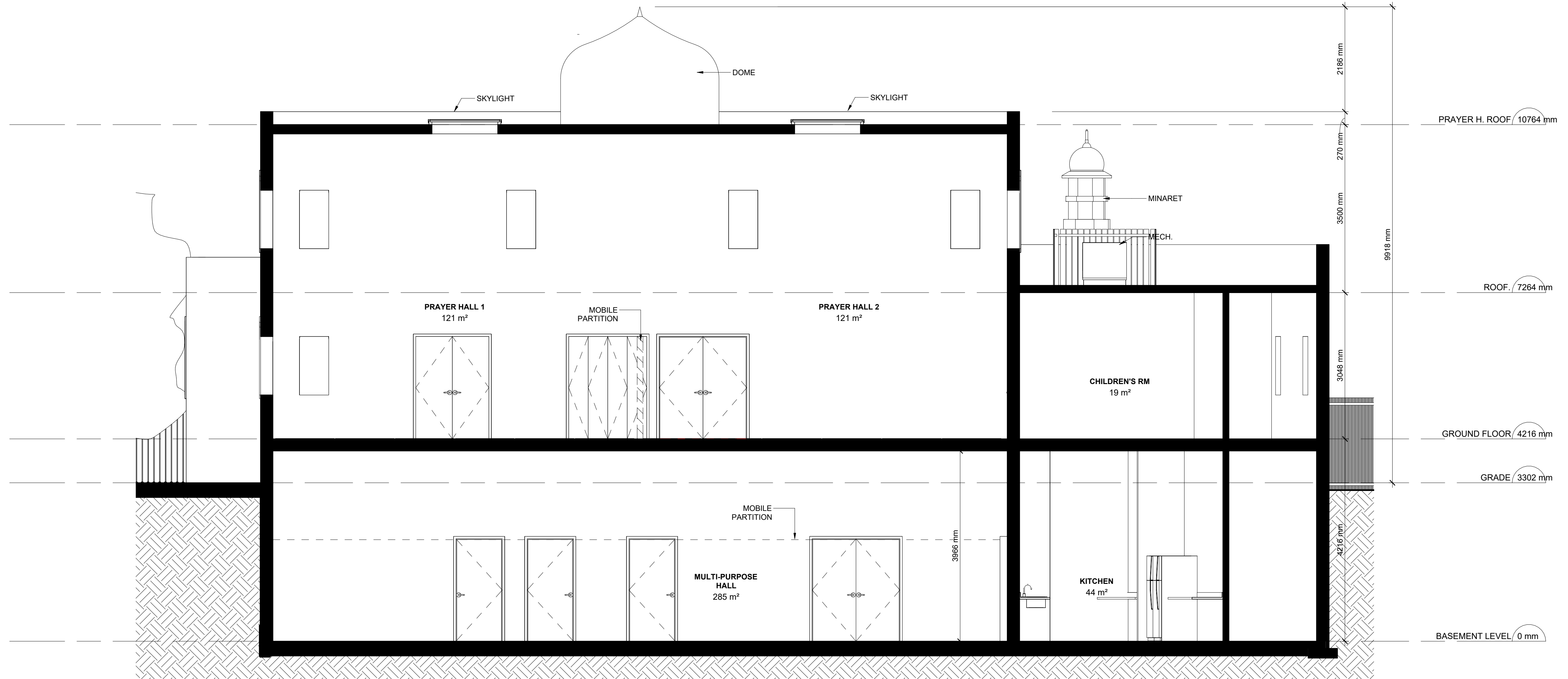
PROJECT NAME / LOCATION
MILTON AMJ COMMUNITY CENTRE
 1458 BRONTE STREET SOUTH, MILTON

DRAWING TITLE
ELEVATIONS

DRAWN BY:	MM/MC	PROJECT NO.:	856
CHECKED BY:	MC	SCALE:	1:100
		DATE:	2023-06-02
		DRAWING NO.:	

A2.0

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1 SECTION THROUGH PRAYER HALL
SCALE: 1:50

ISSUE		
NO.	DATE	DESCRIPTION
1	2023/03/02	ISSUED FOR COORDINATION

REVISION		
NO.	DATE	DESCRIPTION
1	2023/03/02	REVISION TO BLDG LOCATION

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STAMP

PROJECT NAME / LOCATION
**MILTON AMJ
COMMUNITY CENTRE**

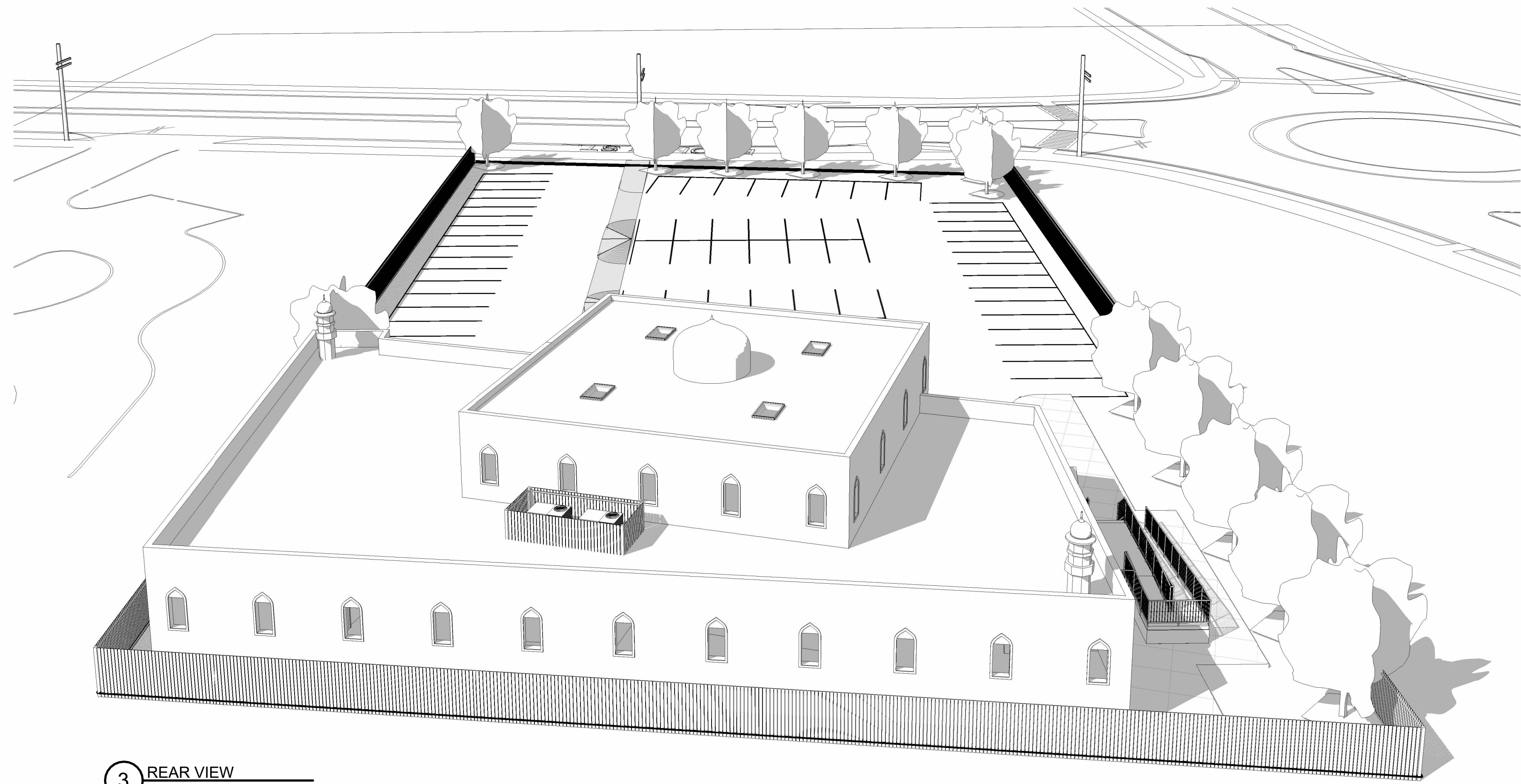
1458 BRONTE STREET
SOUTH MILTON

DRAWING TITLE
BUILDING SECTION

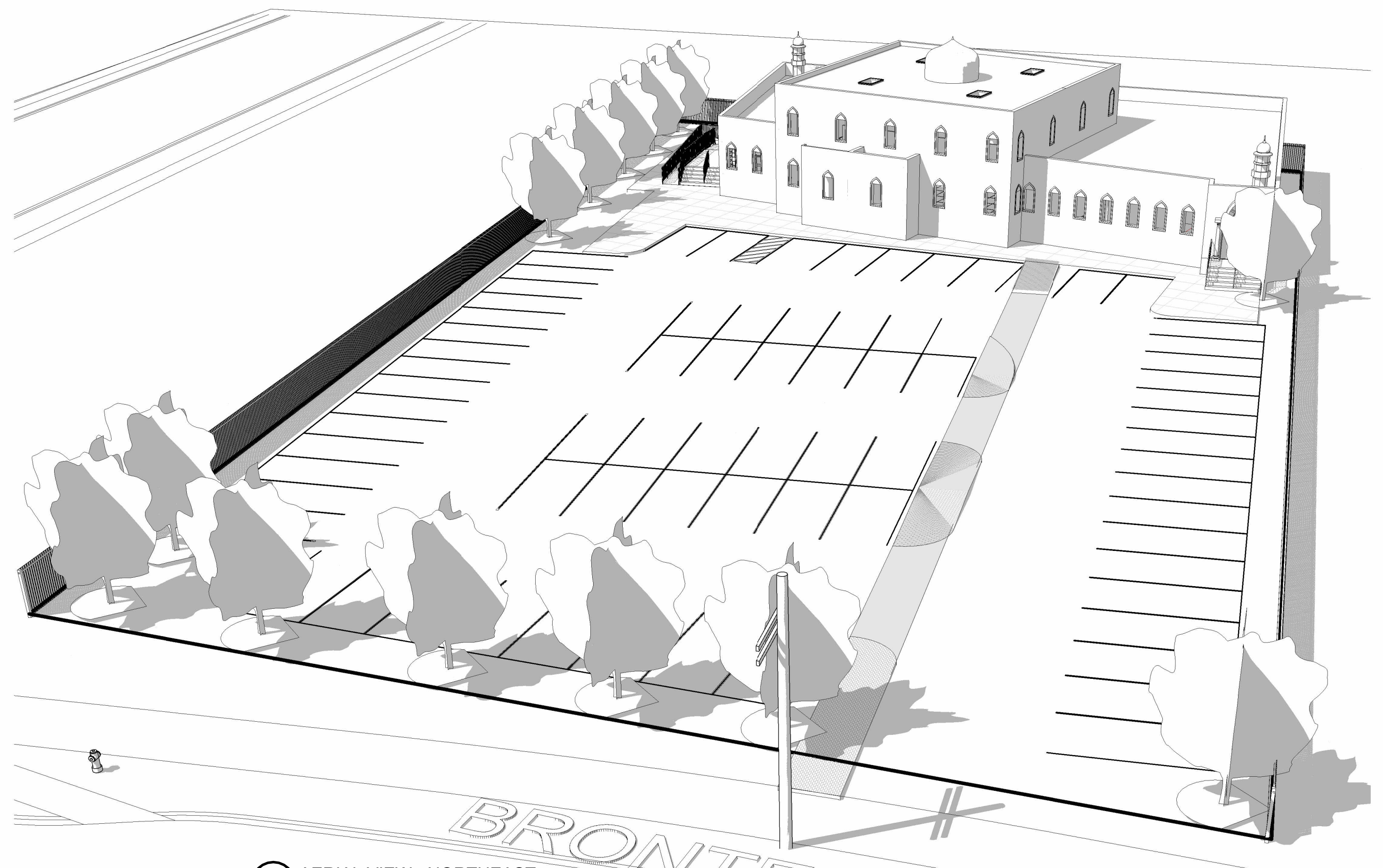
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CHECKED BY: MC	SCALE: AS NOTED
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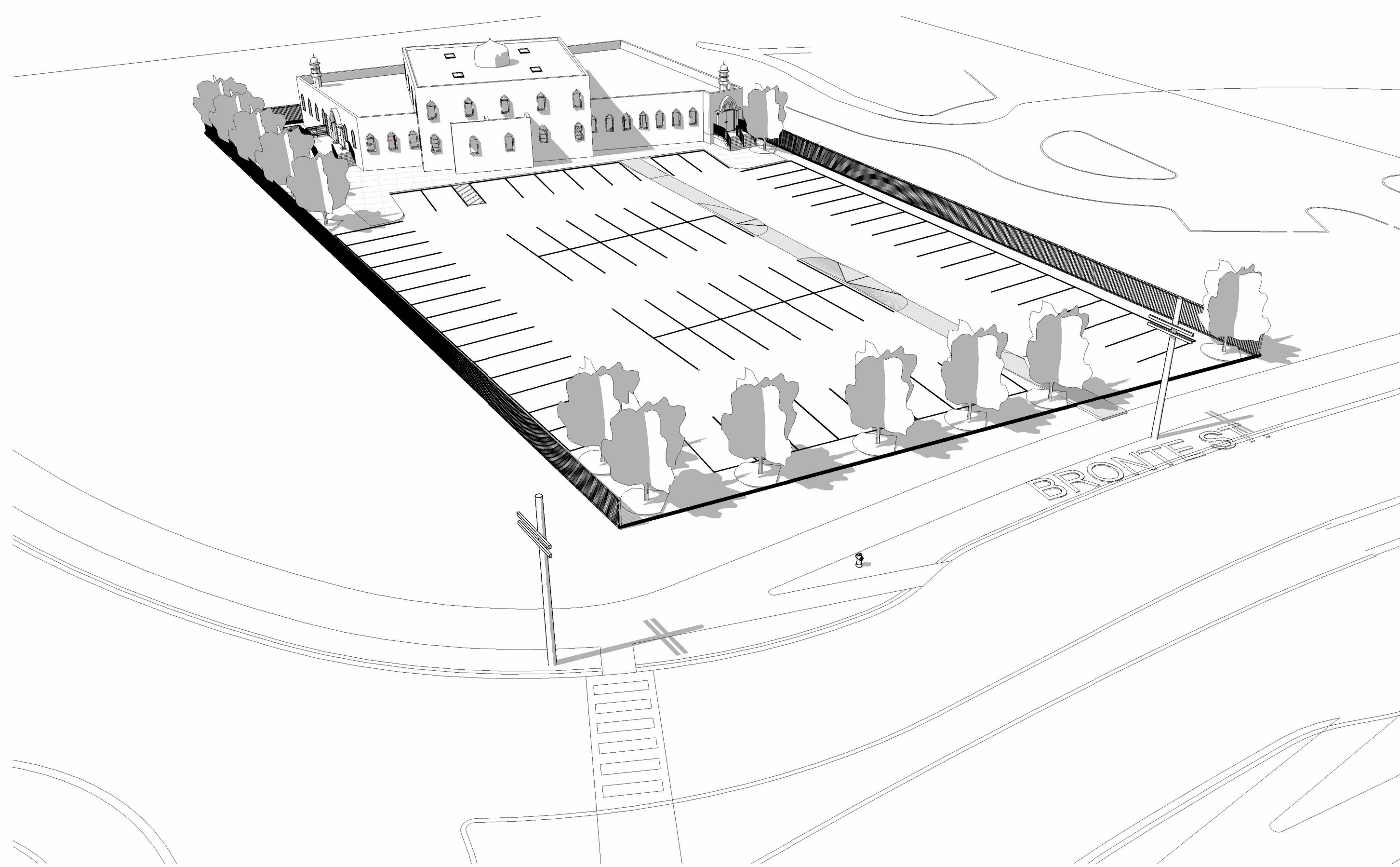
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3 REAR VIEW
SCALE:



2 AERIAL VIEW - NORTHEAST
SCALE:



1 AERIAL VIEW - SOUTH EAST
SCALE:

ISSUE		
NO.	DATE	DESCRIPTION
1	2023/03/02	ISSUED FOR COORDINATION

REVISION		
NO.	DATE	DESCRIPTION
1	2023/03/02	REVISION TO BLDG LOCATION

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STAMP:

PROJECT NAME/LOCATION:
MILTON AMJ COMMUNITY CENTRE

1458 BRONTE STREET SOUTH, MILTON

DRAWING TITLE:
3D VIEWS

DRAWN BY: MM/MC	PROJECT NO.: 856
CHECKED BY: MC	SCALE:
	DATE: 2023-06-02
	DRAWING NO.:

A4.1

APPENDIX B

Road Traffic Data



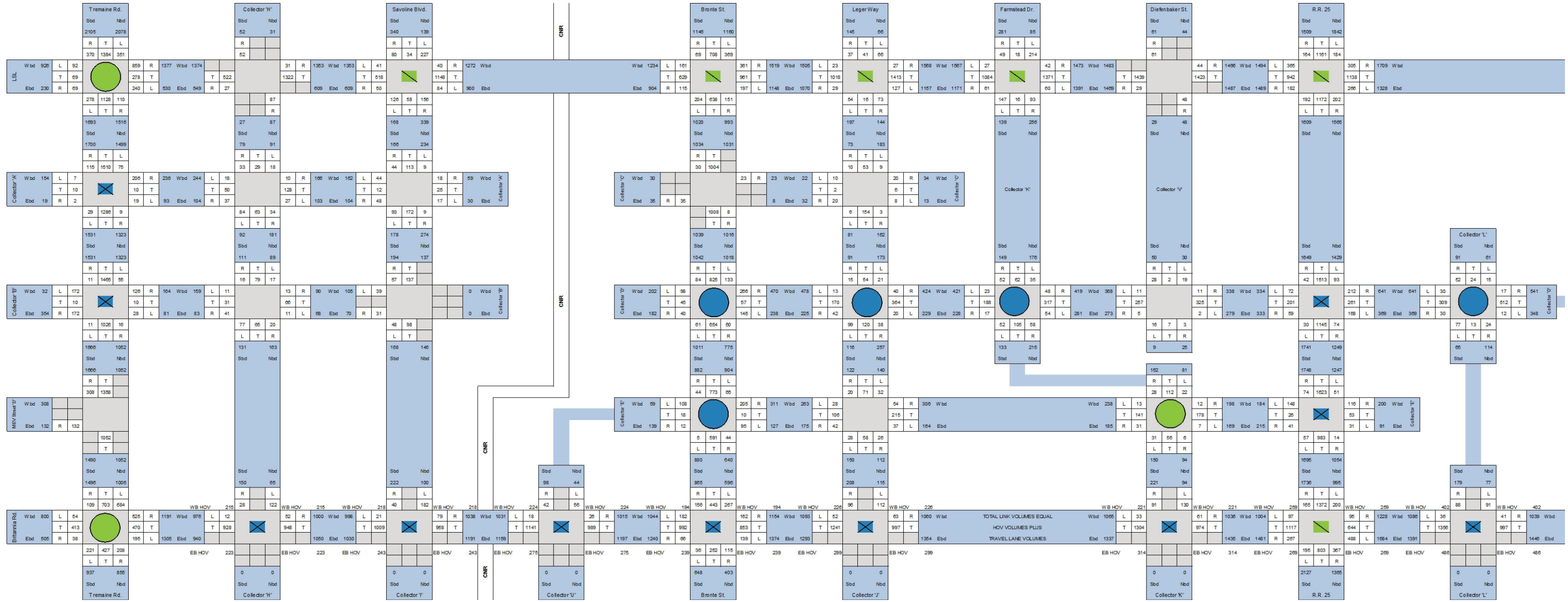
ACOUSTICS



NOISE



VIBRATION



- Legend**
- Existing Traffic Signal
 - Proposed Traffic Signal
 - 2015 Roundabout
 - Proposed Roundabout

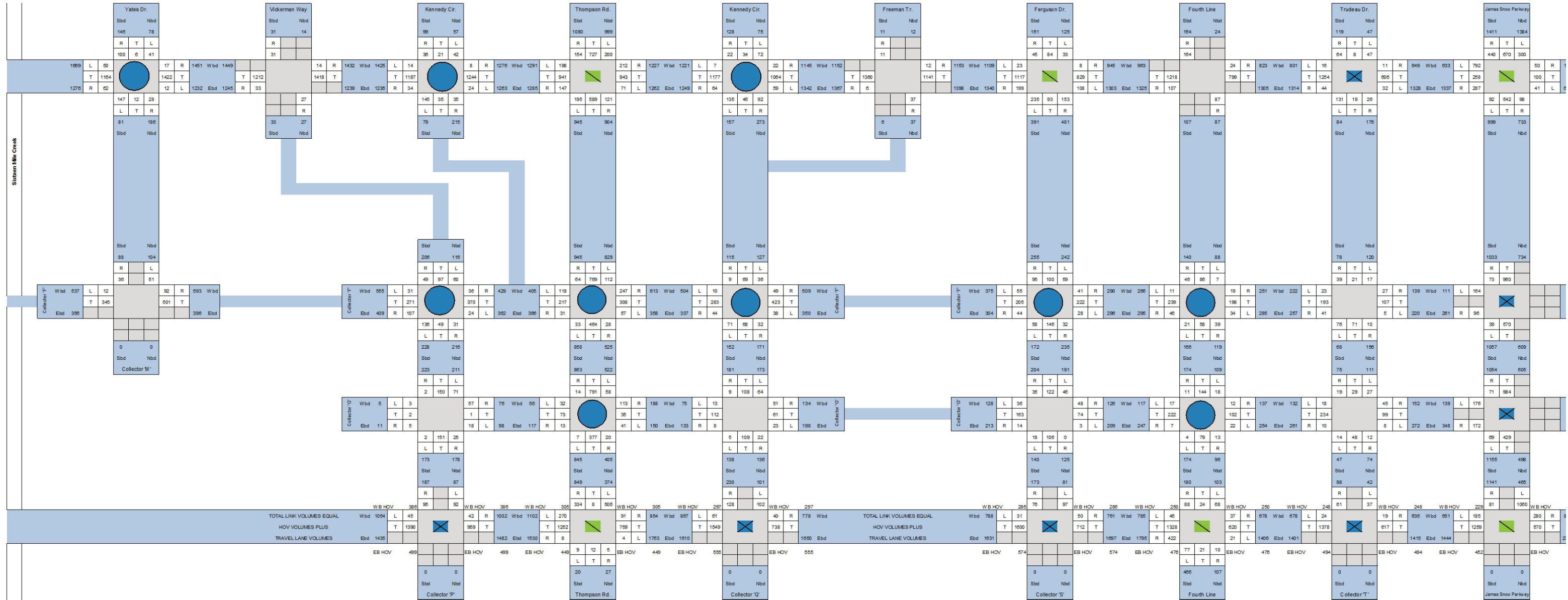


Future draft plans will confirm a final recommended design criteria.







Milton Phase 3 Landowners Group
 Boyne Survey
 Road Network Assessment
 AM Peak Hour
 Total 2026 West Block Traffic

Job Number | 28-21522
 Revision | C
 Date | Sept 2017
Figure 11A



Legend

-  Existing Traffic Signal
-  Proposed Traffic Signal
-  2015 Roundabout
-  Proposed Roundabout

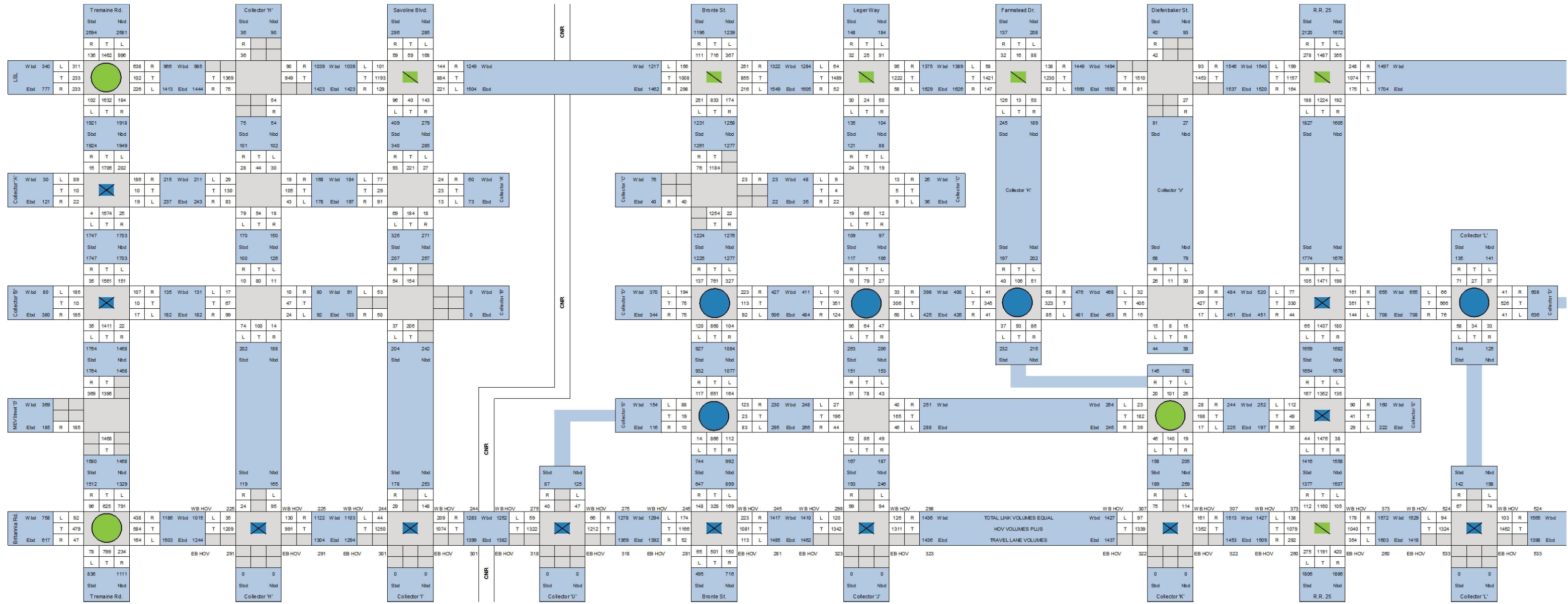


Future draft plans will confirm a final recommended design criteria



Milton Phase 3 Landowners Group
 Boyne Survey
 Road Network Assessment
 AM Peak Hour
 Total 2026 East Block Traffic

Job Number | 28-21522
 Revision | C
 Date | Sept 2017
Figure 11B



- Legend**
- Existing Traffic Signal
 - Proposed Traffic Signal
 - 2015 Roundabout
 - Proposed Roundabout

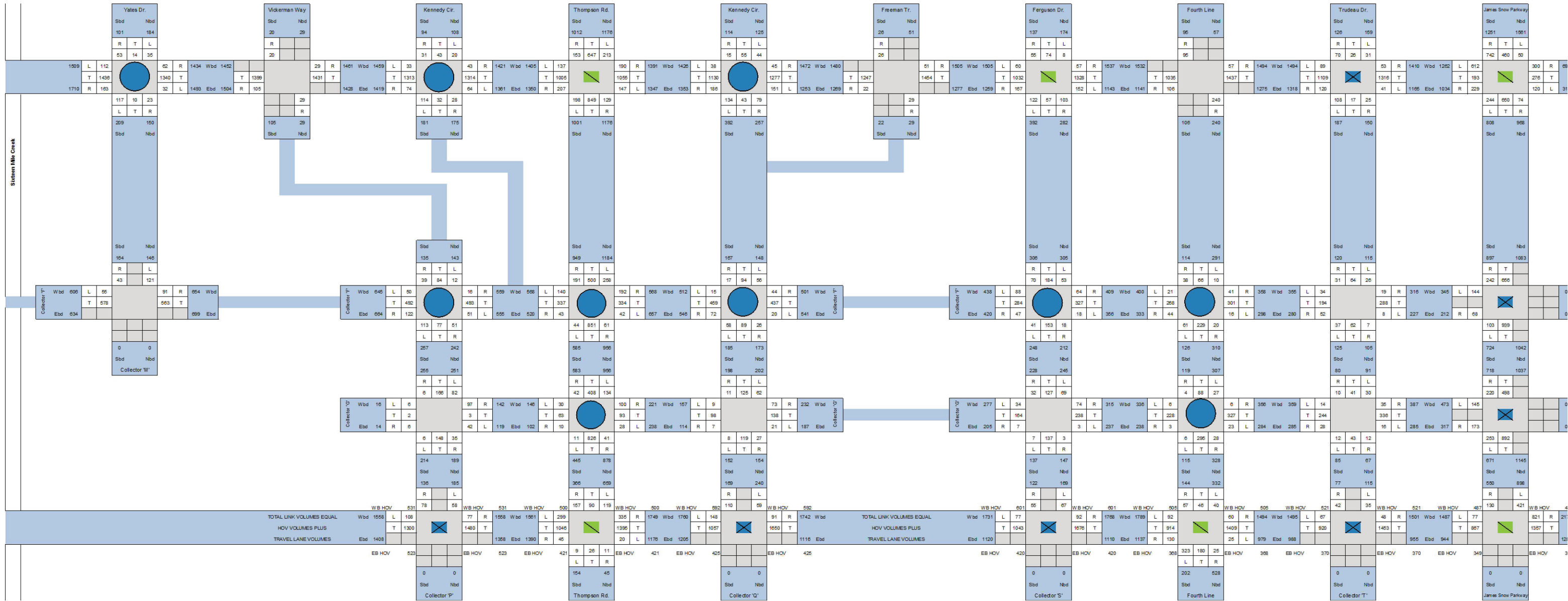


Future draft plans will confirm a final recommended design criteria.



Milton Phase 3 Landowners Group
 Boyne Survey
 Road Network Assessment
 PM Peak Hour
 Total 2026 West Block Traffic

Job Number | 28-21522
 Revision | C
 Date | Sept 2017
Figure 12A



Legend

- Existing Traffic Signal
- Proposed Traffic Signal
- 2015 Roundabout
- Proposed Roundabout



Future draft plans will confirm a final recommended design criteria.



Milton Phase 3 Landowners Group
 Boyne Survey
 Road Network Assessment
 PM Peak Hour
 Total 2026 East Block Traffic

Job Number | 28-21522
 Revision | C
 Date | Sept 2017
Figure 12B

APPENDIX C

Rail Traffic Data



ACOUSTICS



NOISE



VIBRATION



Train Count Data

TRANSMITTAL

To: HGC Engineering
Destinataire : 2000 Argentia Rd
Plaza, Suite 203
Mississauga ON
L5N 1P7

Project : HAL-38.72 – Britannia Road, Milton, ON

Att'n: Victor Garcia

Routing: vgarcia@hgcengineering.com

From: Umair Naveed
Expéditeur :

Date: 2022/05/26

Cc: Adjacent Development
CN via e-mail

Urgent For Your Use For Review For Your Information Confidential

Re: Train Traffic Data – CN Halton Subdivision near Britannia Road in Milton, ON

Please find attached the requested Train Traffic Data; this data does not reflect GO Metrolinx Traffic. The application fee in the amount of **\$500.00** +HST will be invoiced.

Should you have any questions, please do not hesitate to contact the undersigned at permits.gld@cn.ca.

Sincerely,

Umair Naveed

Umair Naveed
Project Officer Public Works – Eastern Canada
Permits.gld@cn.ca

Date: 2022/05/26

Project Number: HAL-38.72 – Britannia Road, Milton, ON

Dear Victor:

Re: Train Traffic Data – CN Halton Subdivision near Britannia Road in Milton, ON

The following is provided in response to Victor’s 2022/03/30 request for information regarding rail traffic in the vicinity of Britannia Road in Milton, ON at approximately Mile 38.72 on CN’s Halton Subdivision.

Typical daily traffic volumes are recorded below. However, traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary. For the purpose of noise and vibration reports, train volumes must be escalated by 2.5% per annum for a 10-year period.

Typical daily traffic volumes at this site location are as follows:

***Maximum train speed is given in Miles per Hour**

	0700-2300			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	10	140	50	4
Way Freight	2	25	50	4
Passenger	0	10	50	2

	2300-0700			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	4	140	50	4
Way Freight	0	25	50	4
Passenger	0	10	50	2

The volumes recorded reflect westbound and eastbound freight and passenger operations on CN’s Halton Subdivision.

Except where anti-whistling bylaws are in effect, engine-warning whistles and bells are normally sounded at all at-grade crossings. There is one (1) at-grade crossing in the immediate vicinity of the study area at Mile 40.69 Lower Baseline Road. Anti-whistling bylaws are in effect at this crossing. Please note that engine-warning whistles may be sounded in cases of emergency, as a safety and or warning precaution at station locations and pedestrian crossings and occasionally for operating requirements.

With respect to equipment restrictions, the gross weight of the heaviest permissible car is 286,000 lbs.

The single mainline track is considered to be continuously welded rail throughout the study area. The presence of one switch located at Mile 39.44 may exacerbate the noise and vibration caused by train movements.

The Canadian National Railway continues to be strongly opposed to locating developments near railway facilities and rights-of-way due to potential safety and environmental conflicts. Development adjacent to the Railway Right-of-Way is not appropriate without sound impact mitigation measures to reduce the incompatibility. For confirmation of the applicable rail noise, vibration and safety standards, Adjacent Development, Canadian National Railway Properties at Proximity@cn.ca should be contacted directly.

I trust the above information will satisfy your current request.

Sincerely,

Umair Naveed

Umair Naveed
Project Officer Public Works – Eastern Canada
Permits.gld@cn.ca

APPENDIX D

Sample STAMSON 5.04 Output



ACOUSTICS



NOISE



VIBRATION

