URBAN DESIGN BRIEF

MARKETPLACE WEST

Updated: April 25,2024

35 STOREY APARTMENT BUILDING
1034 MCGARRY TERRACE

PROGRESSIVE ARCHITECTS, LTD.
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PROJECT DESCRIPTION:

PROJECT SUMMARY:

The proposed building is located at the corner of Marketplace and the McGarry Terrace extension. The building consists of a four-storey base podium, residential link and two towers. The podium is to provide ground floor commercial spaces and building ancillary spaces at the first floor as well as residential units at the remaining 3 floors of the base. Within the open spaces surrounding the base, it is proposed to provide a large open courtyard that are meant for public use facing Marketplace Ave. The open spaces account for approximately 25% of the overall site. On top of the base, the proposed building has 2 towers providing a total of 592 residential units and amenities. Below grade it is proposed to have 6 levels of underground parking providing approximately 653 spaces.

PROJECT STATISTICS:

Gross Floor Area:	67,000m² (West Tower 38,730m² + East Tower 28,270m²)
Floor Plate Breakdown:	1st FLR Retail-1120m² 2nd-4th FLRS Residential Units- 1782m² 5th-9th FLRS Residential Units- 1483m² 10th&11th FLRS Residential Units- 1078m² 12th-35th FLRS WEST Residential Units- 562.7m² 12th-26th FLRS EAST Residential Units- 576m²
Total No. of Units:	Total Units- 592 Studio Units- 46 Units (7.8%) 1 Bed Units- 290 (49%) 2 Bed Units- 244 (41.2%) 3 Bed Units- 12 (2%)
Total No. of Parking Spaces:	Total Spaces- 653 Standard Stalls – 457 Midsize Stalls- 98 Compact Stalls- 81 BF Type B- 8 BF Type A- 9
Total No. of Bike Parking:	Total Spaces- 301
Building Height:	130m
Lot Coverage:	55.2% (1st FLR Footprint 2289m²)

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DESIGN DIRECTIVES:

RESPONSE TO DESIGN POLICIES- OFFICIAL PLAN

MOBILITY:

The concept plan for the proposal includes 653 underground parking spaces allocated between residents, visitors, and commercial units. Access to the parking garage is shared with the abutting development. The driveway entrance configuration ensures that pedestrians using Marketplace will have right of way over vehicles entering or exiting the site.

HOUSING:

The proposal includes rental dwellings ranging from studio to three-bedroom units. Through the Canada Mortgage and Housing Corporation (CMHC) MLI Select Program the proposal is seeking preferential financing in exchange for providing below-market rent, barrier-free units, and achieving sustainability standards.

PARKS AND RECREATION FACILITIES:

The proposal provides a large courtyard within the site along Marketplace Avenue. The courtyard will integrate with setbacks and sidewalks along Marketplace Avenue to create a larger functional space. Creating a variety of community amenities and gathering places.

URBAN DESIGN:

The courtyard abutting Marketplace Avenue is situated to animate the streetscape and integrate the commercial spaces. This space is located along Marketplace Avenue makes it easily visible, accessible, and welcoming to residents and the public.

The proposed building heights and orientation are consistent with the direction of the Hub Town Centre designation. The proposal is set back from Neighbourhoods, providing a transition from the site to surrounding low-rise communities.

Building heights decrease incrementally from the site to the east and south. The four-storey podium provides a transition in materials and massing from the podium to the tower and linked section above the fourth floor.

There are private outdoor amenity areas located on the north side of the building at-grade and on the roof at the 11th floor. The courtyard in combination with the private amenity areas will be spaces designed to provide protection from heat, wind, extreme weather, noise, and air pollution. Extensive landscaping and tree planting is proposed at-grade through the Landscape Strategy.

The proposed towers provide sufficient spacing between each other and the tower to the north. The east tower is separated from the western Havens tower by approx. 21m; while this is less than the 23 m separation preferred by the Official Plan and noted in the Zoning By-law, the reduction is minimal.

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DRINKING WATER, WASTEWATER & STORMWATER:

The Assessment of Adequacy of Public Services report prepared by McIntosh Perry examines the required water and sanitary servicing requirements of the proposed development and investigates existing and planned infrastructure that is accessible to the proposal.

SUBURBAN TRANSECT:

High-rise buildings, considered between ten and 40 storeys, are permitted in Hub Town Centres in the Suburban Transect by the Official Plan.

The proposal introduces higher-density mixed-use development in proximity to rapid transit network. The proposal provides a range of dwelling sizes (from studio to three-bedroom units) and will provide rental housing to a broad range of demographics. The proposal will provide additional purpose-built rental housing to Barrhaven while also increasing the supply of apartment dwellings.

EVOLVING OVERLAY:

The proposal further advances the urban built form along Marketplace Avenue and other neighboring streets in the Town Centre. The proposal frames the public realm with active frontages and providing trees and soft landscaping in a more efficient use of land.

TOWN CENTER HUB:

The increased height and density proposed is consistent with the evolving environment. The proposed mixed-use development promotes efficient development in proximity to a major existing transit station and existing amenities. The proposed form will frame the public realm while introducing a publicly accessible courtyard. Building entrances have been located to provide direct access to sidewalks and the public courtyard. While vehicle parking, loading and service areas have been located away from public streets with the principal vehicle access shared with the neighboring development to minimize its impact on the public realm.

The proposal is located in an area by commercial retail shopping and within walking distance to an existing transit station. Which supports higher densities and overtime will evolve into dense communities that add value to community and social life. The community will benefit from the increased infill that the proposal will add.

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PREVIOUS CONSIDERATIONS:

Stantec has prepared the following response to recommendations received from the Urban Design Review Panel (UDRP) on 19 June 2023 following an informal presentation by the project team on 2 June 2023. Panel comments have been listed in the left column of the table below, whereas the project team's response is provided in the right column.

PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
KEY RECOMMENDATIONS:	
The Panel recommends revisiting all applicable city guidelines to ensure they are incorporated in the preliminary stages of the design process. Of particular note, the Panel recommends reviewing the City guidelines for: • Building setbacks from property lines • Building height • Building floorplate size, and • Separation between towers	
The Panel recommends the height of the building be limited to a maximum of 30 storeys given its location.	The proposal has been revised to reduce the number of storeys. To ensure that there is variation in height between the two towers, it is proposed that the west tower be reduced to 35 storeys in height, whereas the east tower would be reduced to 26 storeys.
The Panel supports the height of the podium at 4-storeys, however, recommends further increasing the tower step-backs	Larger step-backs are provided along the street-facing (west and south) faces of the proposal.
The Panel appreciates the inclusion of the POPS on Marketplace Avenue; however, the Panel recommends creating a larger POPS that strives to be a central public gathering space for the community.	A Landscape Strategy has been prepared which includes design of the courtyard and abutting sidewalk space. The strategy proposes a continuation of the paving and street tree pattern of the development to the east while integrating seating, planting areas, and green groundcover areas. While the courtyard area remains unchanged, the space now includes improvements to publicly owned space within the Marketplace right-of-way, and provides a continuous landscape approach across the entire frontage of the site. Further grading investigation has removed most stairs and retaining walls previously proposed.
The Panel recommends the public realm treatment of the proposed development be a more comprehensive and robust design proposal that considers pedestrian connectivity through the site and fosters a central gathering space for the future growth in the area.	

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PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
SITE DESIGN & PUBLIC REALM:	
The Panel appreciates the location of the POPS on the site • Consider including animated uses in the POPS including seating and benches. • Consider bolstering the POPS function and appearance as a forecourt for the greater community. • Consider enlarging the POPS along Marketplace Avenue.	A Landscape Strategy has been prepared which includes design of the courtyard and abutting sidewalk space. The strategy proposes additional seating and includes improvements to publicly owned space within the Marketplace right-of-way to provides a continuous landscape approach across the entire frontage of the site.
The Panel recommends increasing the setbacks further from the property line.	Setbacks along Marketplace Avenue have been increased where possible
The Panel suggests the applicant undertake a wind study to ensure that the POPS has four-season pedestrian comfort.	Acknowledged. A pedestrian-level wind study was identified as a requirement of the applications.
The Panel recommends giving greater consideration to the porosity of the site. • Consider incorporating a fully accessible connection across the north property-line. • Consider walkability and pedestrian experience traversing the north side of the building to adjacent sites.	Addition of a connection from the private driveway area to McGarry Terrace would not reduce walking times to or through the site in comparison to a similar path along McGarry Terrace and Marketplace. Additionally, a pathway along the north property line would traverse the communal amenity space intended for building residents. A block length of approximately 140 m will still allow for easy pedestrian circulation and connectivity considering the modified grid street network and comprehensive pedestrian infrastructure.
The Panel suggests an entrance to the tower from the courtyard would be beneficial and support the user's interaction from the front terrace on Marketplace Avenue.	Further detail can be explored through Site Plan Control. At this time several commercial spaces have direct access to the courtyard and will provide permeable, active facades and passive surveillance.
The Panel recommends interchanging the amount of hardscape and softscape shown in the proposal, with a focus on introducing a stronger green element to the plaza space.	The Landscape Strategy provides larger greenspace areas

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PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
SITE DESIGN & PUBLIC REALM(CONT.):	
The Panel recommends investigating a better resolution to the streetscape that allows for plantings and street trees. These public realm investments are important in creating the sense of a neighbourhood core and a downtown area.	A Landscape Strategy has been prepared which includes design of the courtyard POPS and abutting sidewalk space. The strategy proposes additional seating and includes improvements to publicly owned space within the Marketplace right-of-way to provides a continuous landscape approach across the entire frontage of the site. As per the Panel's recommendation, the Landscape Strategy proposed two medium-sized greenspaces in the courtyard with central and encircling walkway to provide access to commercial entrances. Further details regarding tree planting will be addressed through Site Plan Control.
The Panel recommends giving greater consideration to the Mainstreet condition on Marketplace Avenue. • Consider access to amenities, retail, schools, etc. • Consider the character of the streetscape and how the project contributes to establishing Marketplace Avenue as a Mainstreet. • As proposed, the POPS reads as a semi-private space, not a public space. The Panel recommends designing the POPS in a way that is more inviting to the public and passers-by. Consider how to best locate and design the POPS to take advantage of the Mainstreet and optimize public use. • The Panel has concerns regarding the survival of trees as proposed. Consider the viability of the POPS space having a greater connection to the street corner and allowing more space for the trees to thrive.	
The Panel recommends designing a bigger POPS that would be more usable for local's leisure. • Consider designing one large central greenspace with more soft-scaping and large tree canopies. • Alternatively, consider two medium sized greenspaces with large tree canopies and a central walkway that could lead to commercial and residential entry points. • The Panel strongly recommends reconsidering the small tree beds proposed for the POPS. Investigate creating public space with more soft-scaping and identifying ways to ensure the trees thrive to maturity with full-sized canopies.	

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PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
SUSTAINABILITY:	
The Panel recommends greatly reducing the number of parking spaces provided.	The number of parking spaces has been reduced from 748 to 653 spaces. While the site is located close to many amenities and frequent transit, vehicle use remains high in Ottawa suburban areas and there remain challenges to rental uptake in the absence of vehicle parking. All parking has been located below grade and has the potential to be used for other purposes in the future should parking needs decrease.
The Panel appreciates the applicant's exploration of affordable rental units and supports making the building as affordable as possible for residents.	Acknowledged.
The Panel has concerns with the excessive amount of parking spaces being provided.	
BUILT FORM & ARCHITECTURE:	
The Panel appreciates the applicant's exploration of affordable rental units and supports making the building as affordable as possible for residents.	The project as revised proposed 580 residential units ranging in size from studio to three-bedrooms. The property is designated as a Town Centre Hub and a Protected Major Transit Station Area by the City Official Plan. The property is further designated as Mixed Use Neighbourhood by the Downtown Barrhaven Secondary Plan. The property, and surrounding area, are intended for high-density development within walking distance of a range of amenities and public transit options.

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PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
BUILT FORM & ARCHITECTURE (cont.):	
Continuation of previous comment:	The January 2023 CMHC Rental Market Report noted that the rental vacancy rate for the Ottawa-Gatineau region has fallen to 2.1%, with average rents increasing by 17% on new leases. In Nepean specifically, the rental vacancy rate is 1.7%. These rates are considered very constrained. A high quality of life can be provided in higher density neighbourhoods through the provision of high quality public realm and public spaces, providing reliable alternatives to private vehicles for mobility, and ensuring a range of amenities (retail, services, education, recreational, etc.). The proposed development will be supported by, and contribute to, the provision of these amenities.
The Panel has concerns with how tight the separation distances are between the towers.	Tower floorplates have been reduced to the extent feasible to increase tower separation distances and increase step-backs. Tower heights have also been reduced to reduce wind tunnelling. It should be noted that floorplate areas, separation distances, etc. are guidelines only, and not regulations or required. The revised proposed seeks to balance the best practices of the design guidelines with the economic and spatial constrains of the property.
The Panel has concerns with the sizes of the floorplates proposed. • Consider reducing the floorplate sizes to help increase the separation distance between towers. • The Panel recommends designing more slender towers to foster a better quality of life for those living in the units between the two towers and help mitigate privacy concerns. • The Panel recommends reviewing the City of Ottawa Guidelines on tower separation.	The towers propose floorplates of 750 and 765 m2 and are consistent with the design guidelines.

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PANEL RECOMMENDATIONS:	***PROJECT TEAM RESPONSE:***
BUILT FORM & ARCHITECTURE(cont.):	
The Panel has concerns with the density of development being proposed. • Is this concentration of units necessary in this area of the city?	See comment above. Barrhaven Downtown has been designated by the Official Plan, and supported by the Secondary Plan, to accommodate significant development and growth with the intent of developing into a compact, walkable, and vibrant mixed-use district.
The Panel recommends stepping the towers back considerably along the street frontages • Consider a minimum 3 metre step-back above the 4-storey podium • Consider additional step-backs up the tower.	Step-backs have been provided from Marketplace Avenue and McGarry Terrace. Tower floorplates have been reduced to the extent feasible to increase tower separation distances and increase step-backs.
The Panel supports the current proposed massing over the previous studies shown in the presentation.	Acknowledged.
The Panel has strong concerns regarding the size of the floorplates proposed. • The Panel recommends reducing the floorplates to a maximum size of 750 square metres, as per the City of Ottawa guidelines	The towers propose floorplates of 750 and 765 m2 and are consistent with the design guidelines.
The Panel recommends investigating the possibility of a 35-metre separation between the two towers. • Consider tower separation as a remedy to wind-tunnelling and improving the micro-climate of the POPS.	Tower floorplates have been reduced to the extent feasible to increase tower separation distances and increase step-backs. Tower heights have also been reduced to reduce wind tunnelling.
The Panel recommends staggering the heights of the towers to a more appropriate scale and transition from the surrounding context. • Consider a 30-storey tower on the west side nearest to McGarry Terrace, and a shorter tower closer to 20-storeys on the east side	To ensure that there is variation in height between the two towers, it is proposed that the west tower be reduced to 35 storeys in height, whereas the east tower would be reduced to 26 storeys.

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PREVIOUS CONSIDERATIONS:

As a response to the UDRP recommendations provided on June 2nd, 2023, and Phase 2 Pre-Consultation meeting Nov 10th, 2023 :

1. We have reduced the building height and number of storeys from 40 to 35 at the west tower and from 30 to 26 at the east tower. We have also reduced the number of units from 619 to 592.

2. The area of the tower floor plates have been reduced to less than 750 m² per tower.

3. The massing along Marketplace has been revised to create more stepping from the podium level to the tower as well as between the podium and the residential link. The central podium to the residential link currently provides a 3m setback between levels. The southeast corner of the west tower has been setback about 4.75m from the previous design. The southwest corner of the east tower has been setback an additional 2.1m from the previous design. The east tower set back to the property line has been increased to 11.65m. We have stepped back the east and west building facades by 1.5m allowing for additional stepping from the podium.

4. GJA Landscape Architect have been assisting in developing the public courtyard into a more community driven gather space and creating more connectivity with the public realm. The new landscape strategy creates more open and accessible gather spaces, a larger green space in the core of the space. With this landscaping strategy we have also introduced a colonnade of city trees along Marketplace Ave & McGarry Terrace extension.

5. We have considered the accessibility of the tower from the courtyard and created an additional exit/entry point for the residents to directly access the courtyard.

6. The number of parking spaces have been reduced from 749 spaces to 653 spaces.

7. The overall building expression been updated by detailing the base podium levels matching the neighboring developments. The tower assembly was simplified by applying uniformity to the form and more glass elements to lighten the overall massing. Considerations were made on how to simplify the building massing at its penthouse levels as well. We kept some of the vertical elements that were previously provided but simplified the overall masses to cap the structure.

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SITE, CONTEXT & ANALYSIS:

EXISTING SITE CONDITIONS- PROPERTY DESCRIPTION

The property is located north of the intersection of Marketplace Avenue and Sue Holloway Drive. While the property fronts on Marketplace Avenue, the property is addressed as 1034 McGarry Terrace due to it having approximately 20 m of frontage onto McGarry Terrace. The site is currently vacant and is being used for construction logistics related to the adjacent development.

The property is rectangular in shape with 70.4 m of frontage on Marketplace Avenue, 20 m of frontage on McGarry Terrace, and an area of 5,194 m^2 (1.28 acres). The property is legally described as *Part 1 on Plan 4R-31372 and Part 1 on Plan 4R-33239, also known as Part of Part 3 on Plan 5R-4730, subject to an easement over Part 63 on Plan 4R-34704, subject to an easement over Part 1 on Plan 4R-31372 in favour of the City of Ottawa as in OC2058616, Part of Lot 15 Concession 2 (Rideau Front, Geographic Township of Nepean, now City of Ottawa.*

Aerial imagery of the site (orange) and surrounding context. Construction south, east, and north of the site includes high-rise residential and mixed use development.

Part 1 on 4R-31372 is a future extension of McGarry Terrace south across the property to the intersection of Marketplace Avenue and Sure Holloway Drive. Water, sanitary, and storm sewers were installed beneath the future right-of-way in 2018 to facilitate development north of the property. Part 1 remains under Kionas' ownership with an easement in favour of the City for infrastructure access.

The site is located immediately west of Haven Towers (150 Marketplace Avenue), a high-rise mixed use development constructed by Kionas and nearing completion. Vehicular access to Haven Towers straddles the property line with the subject property and maintained through mutually beneficial reciprocal easements.

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SITE, CONTEXT & ANALYSIS:

EXISTING SITE CONDITIONS- IMAGES

Existing site from Southwest corner.

Existing site from Southeast corner.

Aerial of existing site.

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SITE, CONTEXT & ANALYSIS:

SITE CONTEXT AND SURROUNDING AREAS

The site is located in Barrhaven Downtown, the core of the City's southwest suburban community that includes Barrhaven, Riverside South, and Barrhaven South.

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SITE, CONTEXT & ANALYSIS:

LAND USES SURROUNDING THE SITE

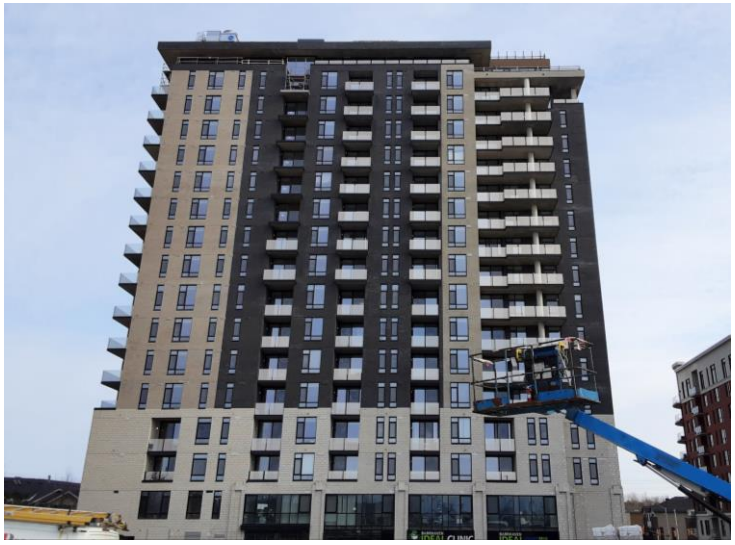
NORTH

Howard Grant Terrace (1024 McGarry Terrace), an 18-story residential building, is located immediately north of the site and was constructed in 2019. McGarry Terrace currently ends at the northwest corner of the site in a temporary turnaround circle. North of Howard Grant Terrace is Dymon Storage (1000 McGarry Terrace), a five-storey self-storage warehouse building with at-grade retail at the corner of McGarry Terrace and Strandherd Drive. Further, separated by Strandherd Drive to the north, the neighbourhood transitions to stacked townhomes and detached dwellings.

Howard Grant Terrace from corner of Marketplace Ave & Sue Holloway.

EAST

Haven Towers (150 Marketplace) is located immediately east of the site and is composed of two towers of 17 and 15-storeys above a seven-storey podium with at-grade retail facing Marketplace Avenue and Longfields Drive. Northeast of the site is The Court at Barrhaven, a three-storey independent living community operated by Atria Retirement. Further east, separated by Longfields Drive, is *École secondaire catholique Pierre-Savard* (1110 Longfields Drive), a French language school accommodating grades 7 to 12. The neighbourhood southeast of the corner of Longfields Drive and Clearbrook Drive is composed of stacked townhomes and townhouses and, separated by Strandherd Drive to the north, the neighbourhood transitions to stacked townhomes and townhomes.



Under construction Haven Towers on proposed site, looking east.

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SITE, CONTEXT & ANALYSIS:

LAND USES SURROUNDING THE SITE

SOUTH

A nine-storey residential building- the Bristol (125 Marketplace Avenue) and eight-storey retirement community- Waterford Grand (121 Marketplace Avenue) are located south of Marketplace Avenue opposite the site. Lindenshade Park is located South of Waterford Grand in a neighbourhood composed of four-storey low-rise apartment buildings and stacked townhomes.

WEST

The extension of McGarry Terrace to Sue Holloway Drive will bound the site to the west. West of the site, on the opposite site of the McGarry Terrace extension, is Chapman Mills Marketplace, a large-format shopping centre with extensive surface parking. A Wal-Mart Supercentre abuts McGarry Terrace with its principal entrance facing west. Chapman Mills Marketplace includes a range of retail and service uses. Marketplace Station is located 350 m west of the property.

The Bristol from corner of Marketplace Ave & Sue Holloway.

Marketplace Ave looking towards Longfields Drive.

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SITE, CONTEXT & ANALYSIS:

TRANSPORTATION AND MOBILITY

The property abuts Marketplace Avenue, a two-lane collector street with off-peak on street parking and a posted speed limit of 50 km/h.

Barrhaven Downtown is currently served by the City's bus rapid transit network with several stations along the Southwest Transitway and the Chapman Mills Transitway. The area is also well-served by frequent, regular, and peak bus routes. The following bus routes listed have stops within 400 m (five-minute walk) from the property.

Routes 75 and 173 will connect to Baseline Station upon completion of the light rail Line 1 extension (target completion 2025). Route 99 will connect to Leitrim Station upon completion of the light rail Line 2 extension (target completion late 2023). An environmental assessment study is currently underway to extend Line 1 from Baseline Station to Barrhaven Town Centre Station as part of a third stage of light rail expansion.

Aerial of site (green) and surrounding rapid (blue), frequent (orange), and regular (purple/grey) bus routes. Marketplace Stations is located less than 44 m from the site.

Route	Distance to Closest Stop*	Peak Weekday Frequency	Weekday Operating Range	Sunday Operating Range
75	350 m (5 minutes)	10 minutes	03:28 – 02:58	03:32 – 02:39
99	60 m (1 minute)	15 minutes	04:51 – 00:28	06:24 – 22:11
80	60 m (1 minute)	30 minutes	05:03 – 23:33	07:16 – 22:46
170	350 m (5 minutes)	30 minutes	05:30 – 22:57	05:56 – 22:56
171	350 m (5 minutes)	30 minutes	05:33 – 19:01	09:52 – 15:52
173	350 m (5 minutes)	30 minutes	06:18 – 19:01	none
175	60 m (1 minute)	60 minutes	06:36 – 22:41	19:50 – 19:50
176	60 m (1 minute)	60 minutes	05:56 – 18:57	none
* Note: measured to closest decametre.				

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SITE, CONTEXT & ANALYSIS:

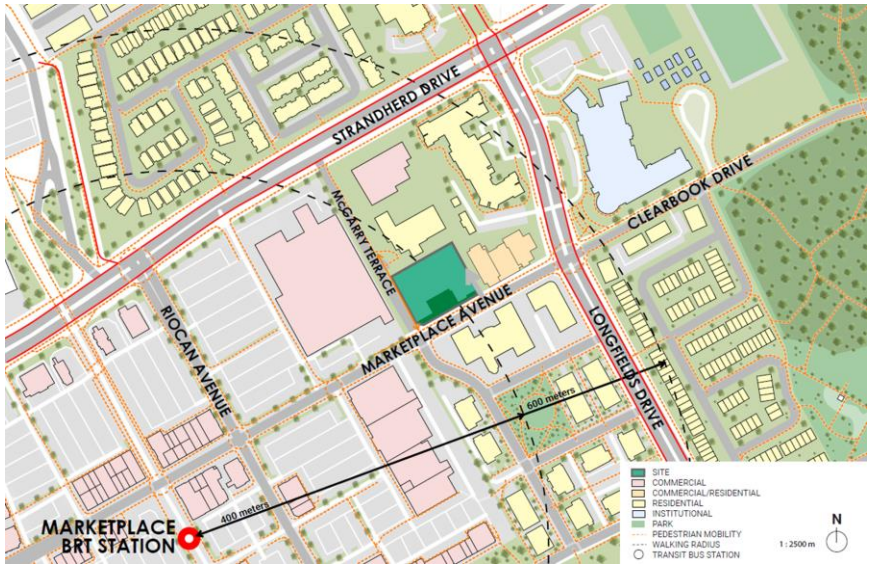

Illustration of pedestrian mobility surrounding site.

The site is within a short walk of three different types of parks.

TRANSPORTATION AND MOBILITY

The site and surrounding areas are connected by an interconnected network of sidewalks, trails, and pathways. Sidewalks are located along both sides of surrounding arterial, collector, and local streets including Marketplace Avenue, Sue Holloway Drive, Longfields Drive, and Clearbrook Drive. Sidewalks and pathways provide direct connections to commercial service and retail uses, schools, parks, and open space areas. Cycling lanes are located along Strandherd Drive and Longfields Drive and link to multiuse pathways (MUPs).

PARKS & OPEN SPACE

A variety of parks and open spaces are located within walking distance of the property and provide a range of recreational opportunities.

Lindenshade Park is an urban parkette located 120 m south of the property. The park has an area of 0.38 hectares and several areas for recreation and unstructured play.

Mancini Park is a neighbourhood park located 450 m southwest of the property. The park has an area of 1.8 hectares and includes a splashpad, playground area, two full tennis courts and one half tennis court.

Chapman Mills West Woodlot is a woodland park of low coniferous upland forest with minor wetland and hardwood elements straddling Clearbrook Drive 250 m east of the property. The park has a combined area of 8.8 hectares and incudes passive recreation space including trails and pathways connecting to Mancini Park.

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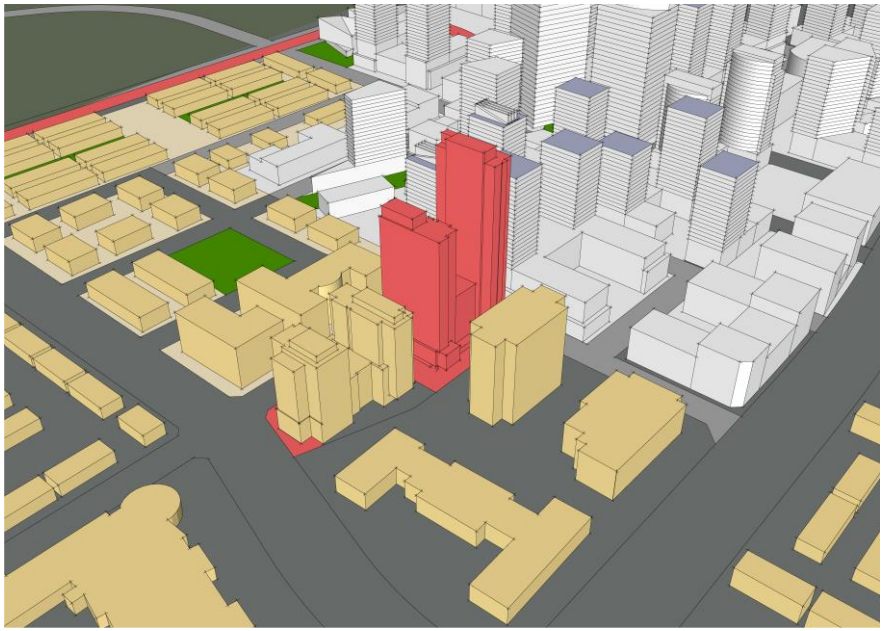
SITE, CONTEXT & ANALYSIS:

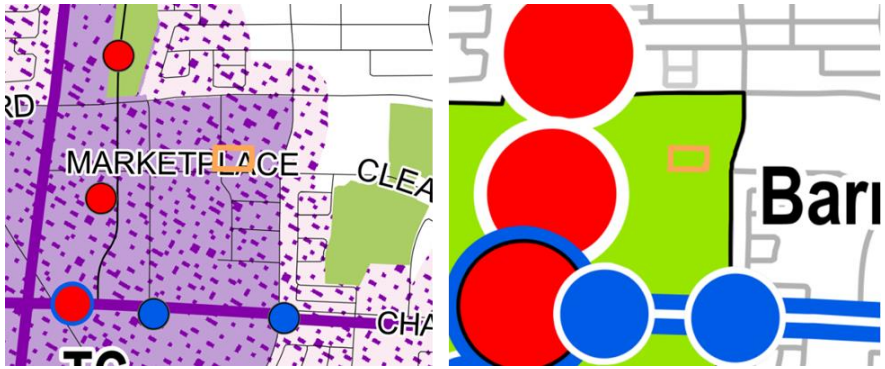
FUTURE & CURRENT DEVELOPMENTS

Barrhaven Downtown is identified by the City's Official Plan as one of three Town Centre Hubs intended to become the most important and largest Hub of their suburban community with employment and more urban-type development.



Conceptual sketch showing existing (yellow) and potential future development (white) of Barrhaven Downtown based on the policies of the secondary plan.

The property is within the Suburban Transect (Schedule A) and designated Town Centre Hub with an Evolving Overlay Schedule B6) by the Official Plan. The property is also located within a Protected Major Transit Station Area (PMTSA) (Annex C1) and the Airport Vicinity Development Zone (Annex C14). Generally, Hubs permit "a diversity of functions, higher density of development, greater degree of mixed uses and higher level of public transit connectivity than the areas abutting and surrounding the Hub".



The site is within the Suburban Transect and designated Hub (Town Centre) and Evolving Overlay (left). Barrhaven Downtown is a Protected Major Transit Station Corridor (PMTSA) (right).

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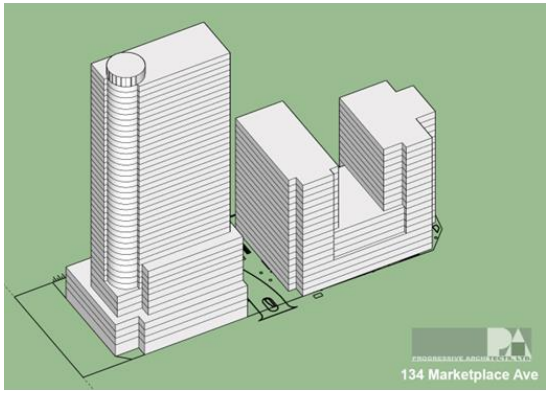
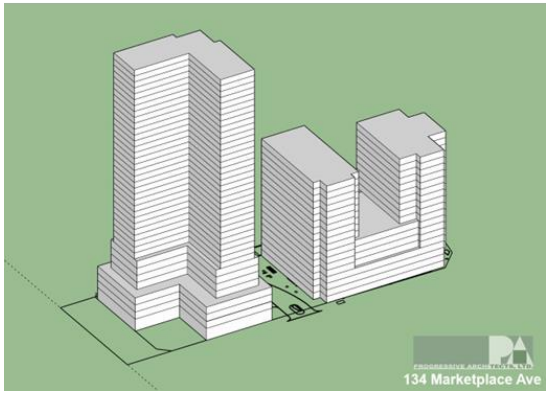
DESIGN RESEARCH:

MASSING STUDY



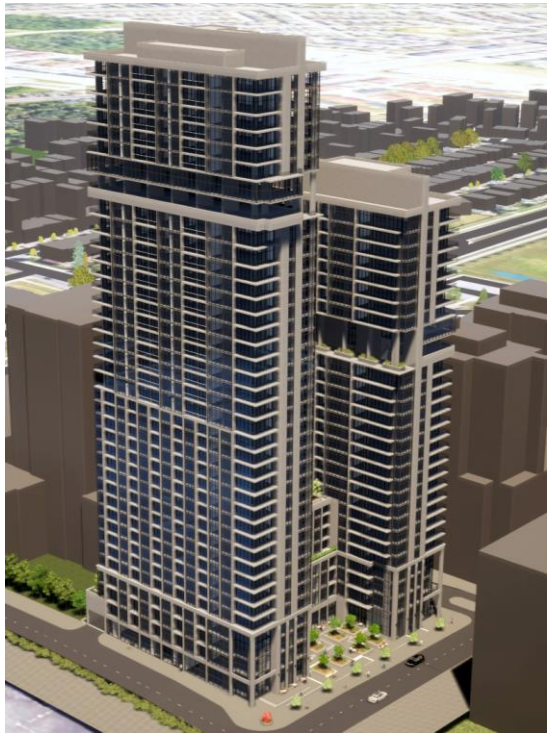


CONCEPT ONE

We started our design by examining the neighboring developments first from the development at the north which shows one tower with a large footprint over 16,500 ft² and a 5 storey base and second from the eastern tower development which shows two slimmer towers properly separated.

To respond to the needs of the investment we created first similar concept like the eastern towers which was submitted to planning for review.

CONCEPT TWO



We created a base that provided many open spaces. Unlike the eastern towers and unlike the building on the north, we created a concept that blended and enriched the public realm. The centre of the base was drawn back reducing the overall footprint, providing a generous size courtyard along Marketplace.

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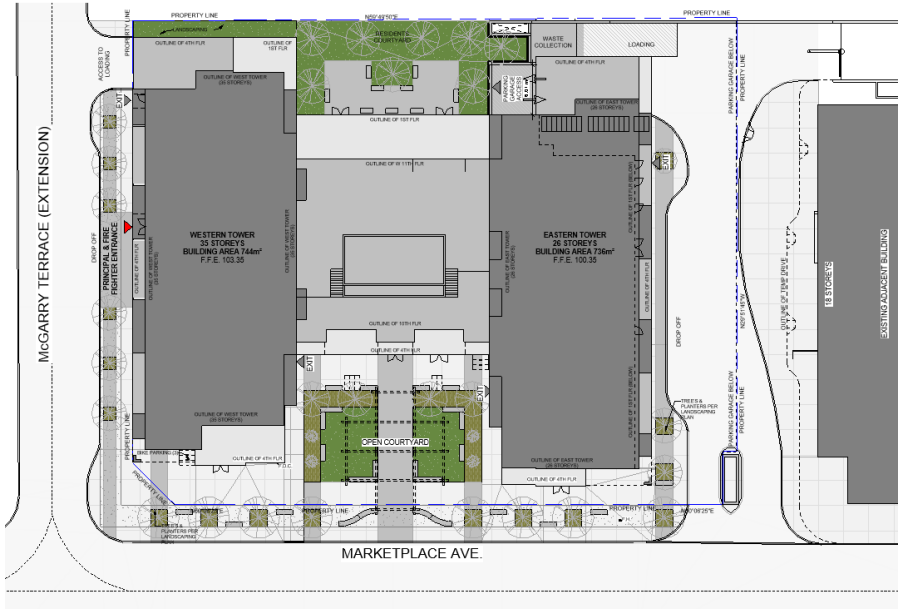
DESIGN RESEARCH:

CURRENT DESIGN CONCEPT

SITE

- The design offers two generous size courtyards. Marketplace Ave is provided with the larger of the two, creating a positive connection to the street and community. This courtyard will be provided as public space.
- Both sides of the front courtyard will be set back from the street between 6.6m to 9.2 m, creating a total public use area of 937 m². The surrounding occupancy of the courtyard is intended to be used by shops, restaurants and other public use activities.
- At the back there will be a residential courtyard at an area of around 290 m² with a landscaped link to McGarry Terrace extension. This courtyard is suggested to be used by the residents of the development which will be connected to the first-floor amenities facing the rear courtyard.
- The exterior public area at the first-floor level totals more than 25% of the site.
- The design of the building and the site is intended to provide as many as possible publicly used spaces along the Marketplace and McGarry Terrace, as well as the two sides of the front courtyard to allow for a smooth public-private transition. The commercial space along the east provides a pedestrian arcade creating a strong pedestrian and commercial connection.
- The principal entrance of the building is proposed to face McGarry Terrace Extension and linked to the east building with a middle lounge.
- Parking garage access has been provided at the back of the building to maximize the pedestrian connections along Marketplace and McGarry Terrace. The intent is to also hide or screen all loading and building services. Drop off and pick up locations have also been provided along McGarry Terrace and the east driveway.



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DESIGN RESEARCH:

CURRENT DESIGN CONCEPT:

BUILDING DESIGN

- The proposed building consists of a base podium and two towers. The 4 storey base podium is meant to have a shape that provides openness to the outside and to allow strong connection between the interior and exterior spaces.
- The façade treatment of the podium base will be mainly of masonry cladding. The detailing and floor heights of the base podium will be in line with the façade articulation of the eastern towers under construction. The base masses will be broken vertically and horizontally with façade articulation down to human scale elements within rhythm while keeping most of the base walls transparent.
- In between the two towers, the proposal is to have a 6-storey link which will house residential units and amenities.
- The two towers, 35 and 26 storeys in height, are designed with small footprints. Each with a GFA less than 750 m².

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DESIGN RESEARCH:

CURRENT DESIGN CONCEPT:

BUILDING DESIGN

- The separation distance between the two towers is 23m.
- The concept behind the two towers is to achieve the largest building perimeter which in return will provide plenty of exterior wall exposure and sunshine to the units.
- The detailing of the tower facades will be predominantly glass and metal panels to provide the feeling of light massing. Residential units will be provided with balconies that are to be surrounded with glass guardrails covering the balcony slab edges similar to the eastern development under construction.
- The 10th floor of the link portion will be dedicated to amenities including a party room, exercise room, golf simulator and an infinity outdoor pool at the roof. With a roof top terrace and an infinity pool on the 12th floor level.

SUSTAINABILITY

- The new concept provides a reduction in the parking count from 748 in the previous design to 653 in the current one.
- Energy efficiency will be achieved through proper building envelope design (airtightness), insulation and thermal values (reduce height loss), proper M&E systems (reduce energy consumption), and eco-friendly products.
- The design Proposes quite a few landscaped and amenity areas which will help reduce urban heat island effects.
- We will study the feasibility of using photo-voltaic cladding panels as an alternative energy source to help reduce electrical and heating costs.
- The residents will have access to community gardens with the rear courtyard which contributes to their overall health and wellbeing.

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DESIGN RESEARCH:

MASSING – EXISTING CONTEXT

SOUTHEAST AERIAL

SOUTHWEST AERIAL

MASSING – FUTURE CONTEXT

SOUTHEAST AERIAL

SOUTHWEST AERIAL

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DESIGN RESEARCH:

BUILT FORM TRANSISITON BETWEEN PROPOSED AND SURROUNDING AREA

The towers and link portions of the building are positioned above a four-storey podium that frames the abutting streets and encloses the proposed courtyard on three sides. A four-storey podium (approximately 16 metres in height) provides a 2:1 ratio of building height to distance from the façade of the mid-rise building on the south side of Marketplace Avenue. The building massing is similar to that of the Havens to the east and provides an urban and active courtyard space which mirrors a courtyard with vehicle drop off area on the south side of Marketplace. The towers have been set back from the street edge established by the podium and are differentiated by a change in materials as well as more pronounced building articulation along the south and west elevations. The west tower—at 35 storeys, has a floorplate of 744 m^2, whereas the east tower—at 26 storeys, has a floorplate of 736m^2. Each tower terminates with a two-storey portion with significantly smaller floorplates to visually narrow their appearance and create a more defined silhouette.

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DESIGN RESEARCH:

BUILT FORM TRANSISITON BETWEEN PROPOSED AND SURROUNDING AREA

The ground floor of the proposed development will contain commercial/retail uses, with residential amenities located on the 1st and 10th floor, with a roof top terrace on the 12th. The remainder of the building will accommodate of residential apartment units. Access to the development and underground parking will be via Marketplace Avenue.

The proposed towers provide sufficient separation between each other (23 m) and with the existing tower to the north (31.5 m). The east tower is separated from the westernmost Haven tower by 21m.

The two towers are 90 m from the closest low-rise residential buildings (being the four-storey apartments at 301 Sue Holloway Drive) and 120 m from the closest ground-oriented residential buildings (102 Lindenshade Drive). Both buildings are also within the Barrhaven Downtown Secondary Plan. The existing surrounding built form provides an incremental transition and reduction in heights from the proposed development to low-rise residential areas to the south, north, and east.

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DESIGN RESEARCH:

RESPONSE FOR ABUTTING PUBLIC REALM-BEYOND THE SITE BOUNDARY

MARKETPLACE AVENUE

Marketplace is a collector street and an active frontage street. The proposal provides a wide sidewalk, additional pedestrian space at the corner of Marketplace and McGarry, and contiguous frontage occupied by commercial spaces with entrances directly to the sidewalk. Regularly spaced street trees along the sidewalk to provide separation from vehicle traffic while also providing summer shade. Streetscape design will continue the approved design in front of the Havens to the east to provide a consistent pedestrian experience.

Southeast corner of building on Marketplace Ave.

Southwest corner of building on Marketplace Ave & McGarry Terrace.

MCGARRY TERRACE

McGarry is a local street with a right-of-way width of 20 m which bounds the development to the west. The street intersects with Marketplace but will provide access to Howard Grant Terrace and the Dymon Storage facility. The proposed development will provide a contiguous four-storey façade along McGarry which includes the principal residential lobby entrance, one commercial space with an active entrance, and another commercial space along the Marketplace corner. An enclosed service bay is provided from the north part of the site to McGarry.

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DESIGN RESEARCH:

RESPONSE FOR ABUTTING PUBLIC REALM-BEYOND THE SITE BOUNDARY

MARKETPLACE COURTYARD

The courtyard will provide a break in the street edge along Marketplace and extend the public realm into the site. The Landscape Strategy envisions a barrier-free public courtyard framed by commercial units and occupied by landscaped areas, seating, and a pergola extending to the street. The courtyard design continues along Marketplace to provide a consistent pedestrian experience that invites the public to use the courtyard.

Marketplace Ave courtyard.

DRIVEWAY ALLEY

The driveway alley provides site access and servicing requirements with pedestrian comfort. The ground floor is inset from the building edge creating an arcade with commercial spaces. Loading spaces are provided for drop-off/loading.

The development has been designed in a manner which ensures a pedestrian scale along Marketplace Avenue via appropriate building setbacks, variations in building articulation and fenestration. The intention is to provide defined transitions from the public realm to the high-rise built form. The ground floor provides a greater floor to ceiling height for the retail and commercial uses and defines the buildings ground floor relationship to the public realm.

Driveway alley access and commercial arcade.

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DESIGN RESEARCH:

BIRD SAFE DESIGN

To avoid monolithic, undistinguished expanses of glazing. The proposal is to use less reflective materials at the podium level. At the towers, to avoid large expanses of glazing we broke the vertical and horizontal spacing to glass mullions to avoid having the glass indistinguishable.

In order to incorporate visual interest and differentiation of finishes. At the podium levels as well as at the towers we introduced different building envelope materials such precast concrete, opaque metal panels, glass and other cladding materials to fragment any glass reflections and add interest.

In response to bird-safe glass requirements since the height of the podium is little more than 16 m the large parts of the glass, particularly the ones that are at the outward walls will be provided with bird-safe glass. As well where green roofs, rooftop gardens, terraces and courtyards are provided special attention will be paid to glass close to these areas towards using bird-safe glass.

Southeast corner of building on Marketplace Ave.

Southeast Aerial of property.

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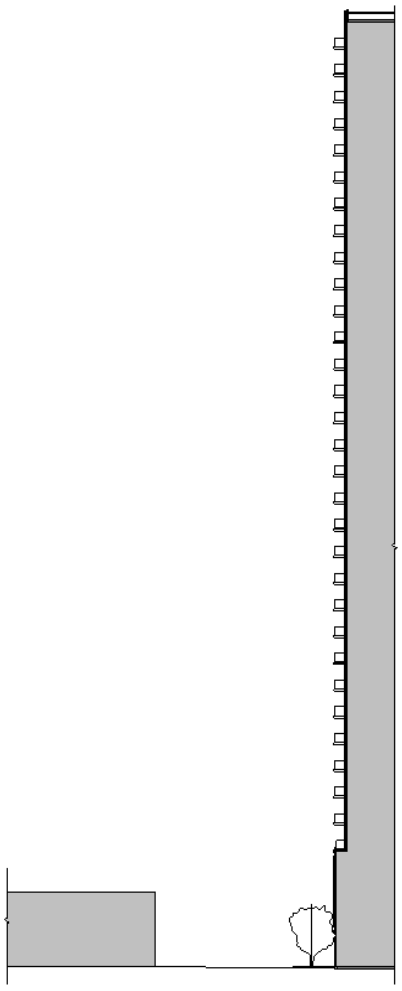
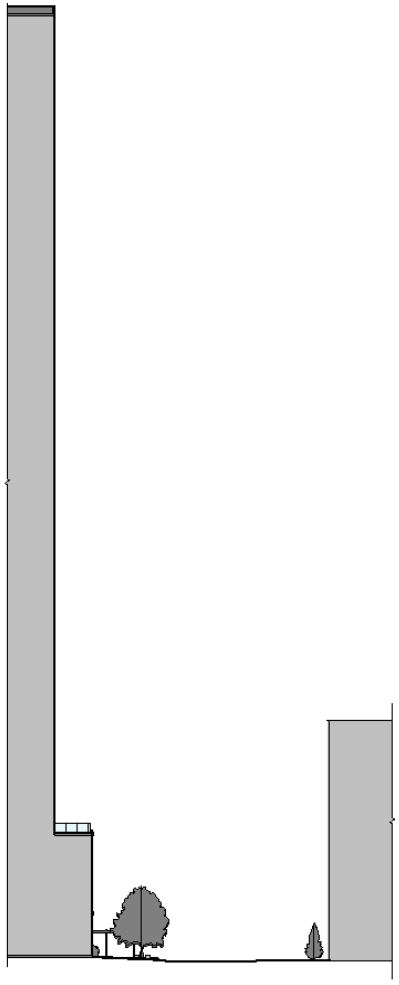
DESIGN RESEARCH:

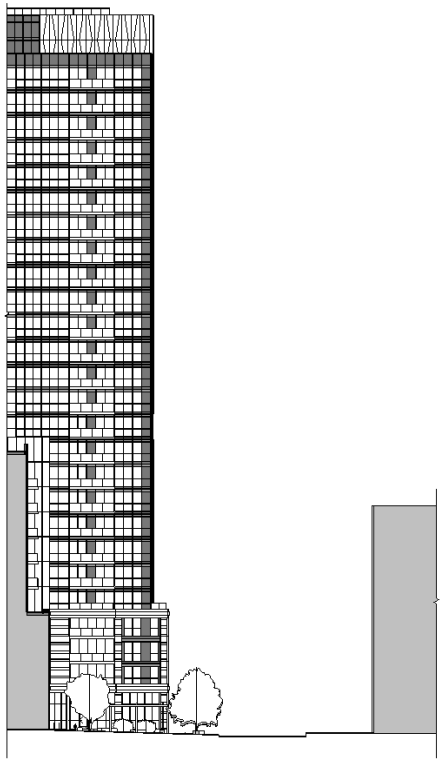
STREET CROSS SECTIONS- BUILDING WALL TO BUILDING WALL



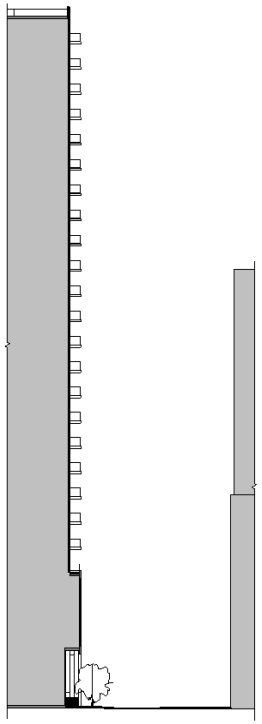
WEST- MCGARRY TERRACE



SOUTH- MARKETPLACE



SOUTH- MARKETPLACE COURTYARD



EAST- PRIVATE DRIVEWAY

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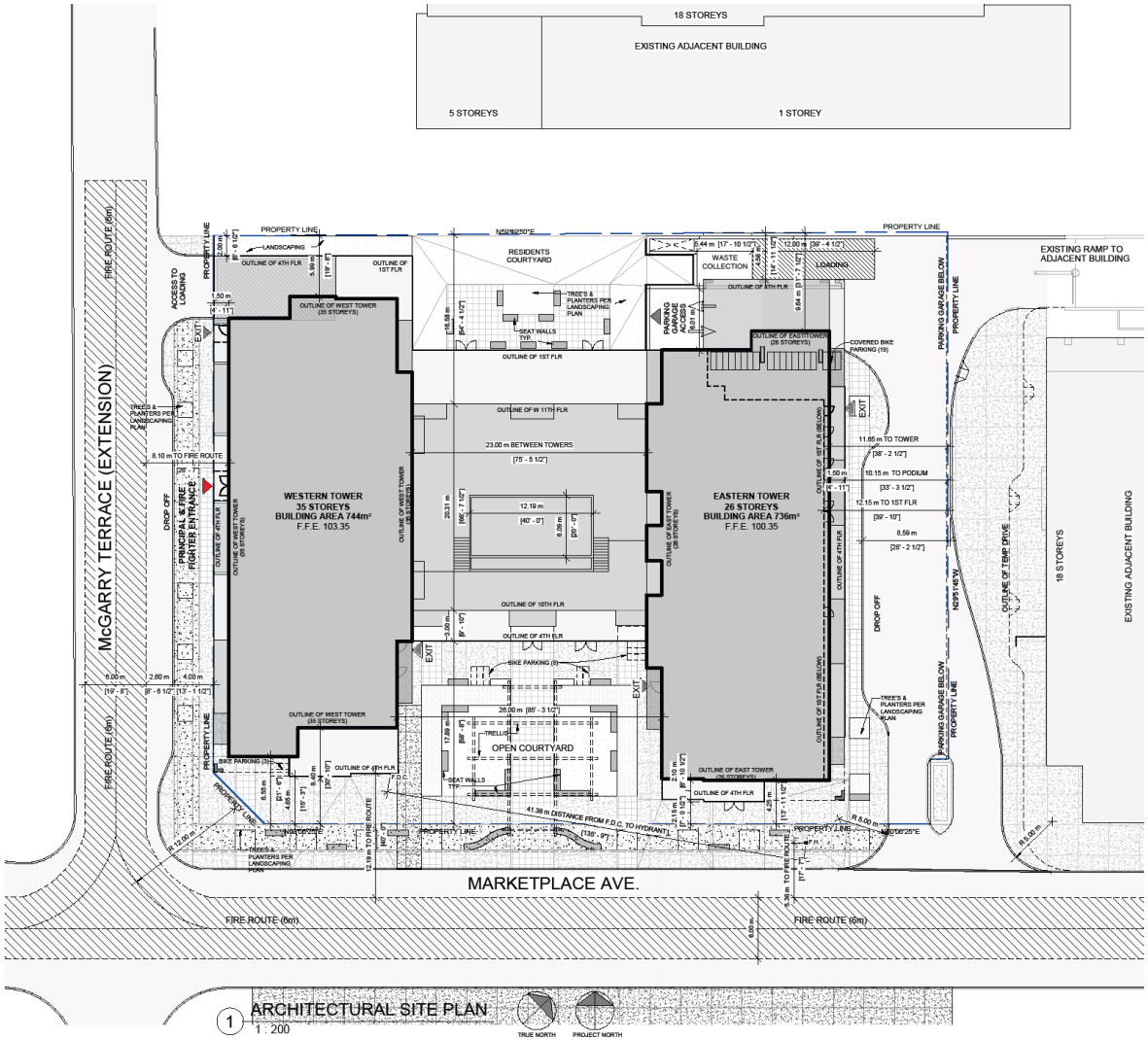
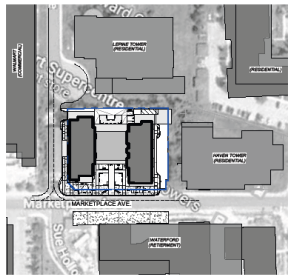
APPENDIX:



1 ARCHITECTURAL SITE PLAN
1 : 200



2 KEYPLAN
1 : 1500

TOTAL UNIT COUNT

LEVELS	PER FLR	# OF LEVELS	TOTAL
PODIUM & LINK			
2ND- 4TH FLR	25 UNITS	3 LEVELS	75 UNITS
5TH- 9TH FLR	24 UNITS	5 LEVELS	120 UNITS
10TH &11TH FLR	17 UNITS	2 LEVELS	34 UNITS
WEST TOWER			
12TH FLR	7 UNITS	1 LEVEL	7 UNITS
13TH- 35TH FLR	9 UNITS	23 LEVELS	207 UNITS
EAST TOWER			
12TH FLR	9 UNITS	1 LEVELS	9 UNITS
13TH- 26TH FLR	10 UNITS	14 LEVELS	140 UNITS
		TOTAL	592 UNITS

UNIT TYPE COUNT

UNIT TYPE	2ND-11TH FLR	WEST TOWER	EAST TOWER	TOTAL
STUDIO	--	46	--	46 (7.8%)
1 BED	143	72	75	290 (49%)
2 BED	76	94	74	244 (41.2%)
3 BED	10	2	--	12 (2%)
TOTAL	229	214	149	592 UNITS

BUILDABLE AREA

LEVELS	PER FLR	# OF FLRS	TOTAL
PARKING			
P1 PARKING	3033 m²	1 FLRS	3033 m²
P2-P6 PARKING	4128 m²	5 FLRS	20640 m²
P6 LOWER LEVEL	2007 m²	1 FLRS	2007 m²
		TOTAL BELOW GRADE	25680 m²
PODIUM			
1ST FLR	2289 m²	1 FLR	2289 m²
2ND- 4TH FLR	2261 m²	3 FLRS	6783 m²
5TH- 9TH FLR	1942 m²	5 FLRS	9710 m²
10TH&11TH FLR	1957 m²	2 FLRS	3914 m²
TOWERS			
12TH-35TH FLR WEST	744 m²	24 FLRS	17856 m²
12TH-26TH FLR EAST	736 m²	15 FLRS	11048 m²
		TOTAL ABOVE GRADE	51592 m²

OVERALL PARKING COUNT

457	PARKING STANDARD 2.6x5.5
99	PARKING MIDSIZE 2.5x5.1
81	PARKING COMPACT 2.4x4.6
8	BF TYPE B PARKING
9	BF TYPE A PARKING
653	

CITY OF OTTAWA ZONING BYLAW 2008-250

MC[2573] MIXED-USE CENTRE ZONE
PROPOSED APARTMENT DWELLING, HIGH RISE

PROPOSED USES:
APARTMENT DWELLING, HIGH RISE (592 UNITS)
RETAIL STORE: 1120m² GFA
LOT AREA: 5104.06m²
LOT FRONTAGE: 78.41m
LOT DEPTH: 57.00m

ZONING PROVISION	REQUIRED	PROVIDED	COMPLIANT
MIXED-USE CENTRE ZONE MC[2573]			
LOT AREA (MIN.)	NO MINIMUM	4,148m²	✓
LOT WIDTH (MIN.)	NO MINIMUM	72.3m	✓
FRONT YARD & CORNER YARD SETBACK (MIN.)	NO MINIMUM	0m, 2.15m	✓/✓
INTERIOR SIDE YARD SETBACK (MIN.)	NO MINIMUM	2.0m	✓
REAR YARD SETBACK (MIN.)	NO MINIMUM	10.15m	✓
FLOOR SPACE INDEX (MAX.)	NO MAXIMUM	17.9 FSI	✓
BUILDING HEIGHT (MIN.)	20 m*†	7.5 m	✓
BUILDING HEIGHT (MAX.)	67 m*	132 m	X
GROSS FLOOR AREA (MAX.)	28,270 m²	67,000 m² (WEST TOWERS 38,730m² + EAST TOWERS 28,270m²)	X
LANDSCAPED AREA (MIN.)	NO MINIMUM	1155 m²	✓
PROVISION FOR HIGH RISE BUILDING (SECTION 77) (AREA B ON SHEDULE 400)			
INTERIOR SIDE YARD (MIN.) PORTION OF A BUILDING THAT ARE 10 STOREYS OR TALLER	11.5 m	5.5 m & 11.65 m	X/✓
PARKING PROVISIONS (SECTION 101) (AREA C ON SCHEDULE 1A) (500m FROM EXISTING RAPID TRANSIT ON SCHEDULE 1A)			
RESIDENTIAL: MINIMUM PARKING SPACES REQUIRED FOR EACH DWELLING UNIT IN A MIXED-USE BUILDING 0.5 PER DWELLING UNIT	592 UNITS X 0.5 = 296 SPACES*	523 SPACES	✓
RETAIL STORE (N70): 1.25 SPACES PER 100 M² GFA, LESS 200 M²	(1120 m² - 200) x 0.0125 =11.5 SPACES	12 SPACES	✓
RESIDENTIAL: VISITOR PARKING: 0.2 SPACES PER DWELLING UNIT	592 UNITS X 0.2 = 118.4 (118) SPACES*	118 SPACES	✓
TOTAL VEHICLE PARKING SPACES:	426 SPACES	653 SPACES	✓
BICYCLE PARKING (SECTION 111)			
RESIDENTIAL: DWELLING UNIT IN THE SAME BUILDING AS A NON-RESIDENTIAL USE 0.5 SPACES PER DWELLING UNIT	592 UNITS X 0.5 = 296 SPACES	296 SPACES	✓
RETAIL STORE (4): 1 SPACE PER 250 M² GFA	1120 X 0.004 = 4.5 (5) SPACES	5 SPACES	✓
TOTAL BICYCLE PARKING SPACES:	301 SPACES	301 SPACES	✓
AMENITY AREA (SECTION 137) (MIXED USE BUILDING, WITH NINE OR MORE DWELLING UNITS)			
RESIDENTIAL: 6 M² PER DWELLING UNIT, AND 10% OF THE GROSS FLOOR AREA OF EACH ROOMING UNIT	592 UNITS X 6 = 3552 m²	5385 m²‡	✓
COMMUNAL AMENITY AREA: MINIMUM OF 50% OF THE REQUIRED TOTAL AMENITY AREA	3552 X 50% = 1776 M²	2692 M²‡	✓
OTHER PROVISIONS			
50% OF THE GROUND FLOOR OF A BUILDING CONTAINING DWELLING UNITS MUST BE OCCUPIED BY NON -RESIDENTIAL USES			✓
NO MORE THAN 12 PARKING SPACES MAY BE PROVIDED AT GRADE			✓
NOTES:			
* PROVISION OF URBAN EXCEPTION 2573			✓
† ONLY 50% OF THE BUILDING ENVELOPE MUST COMPLY WITH THE MINIMUM BUILDING HEIGHT			✓
‡ COMMUNAL AMENITY AREA INCLUDES PUBLICLY ACCESSIBLE FORECOURT			✓

TRUE NORTH PROJECT NORTH

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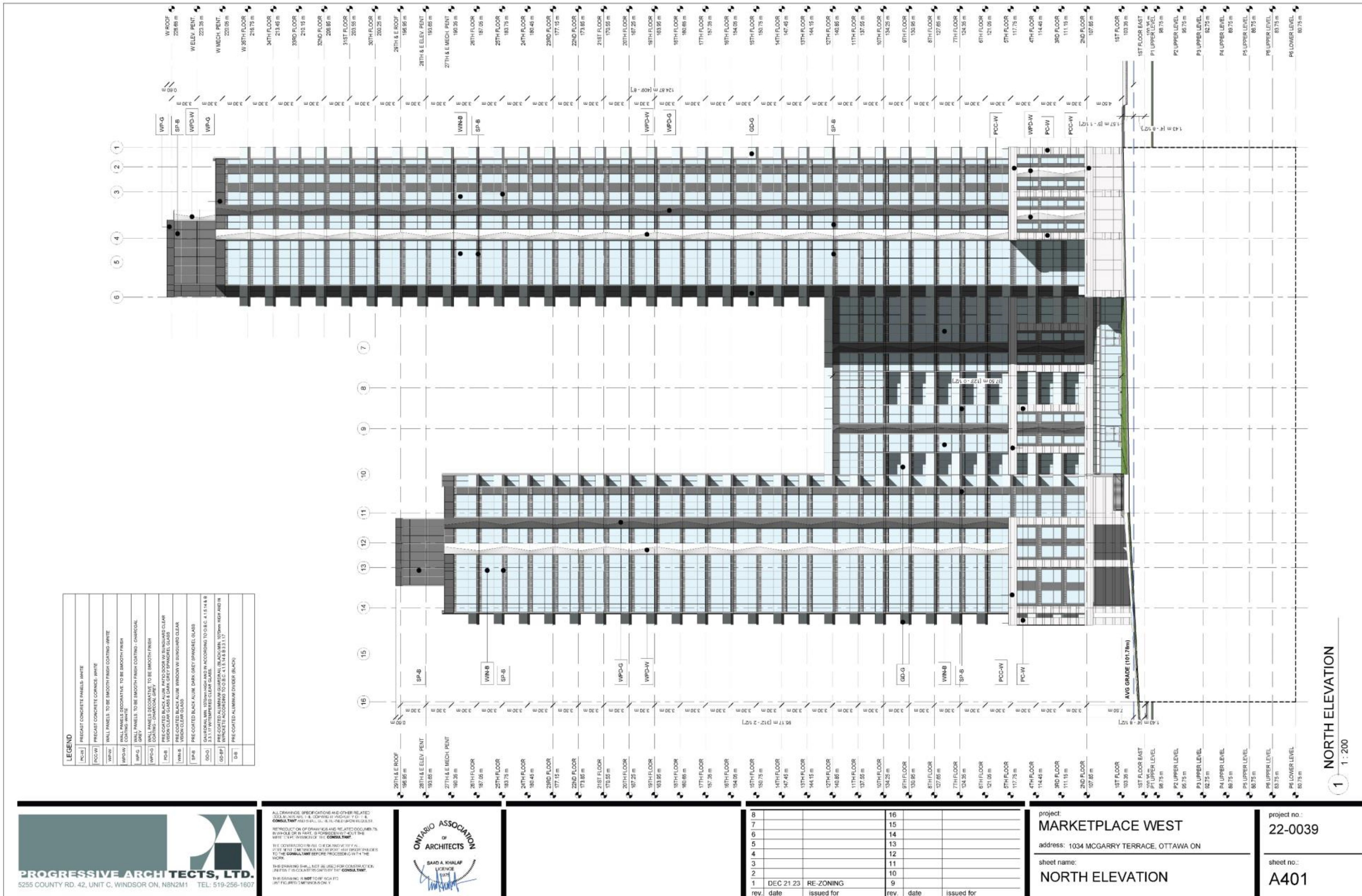
SAAD A. KHALAF LICENCE 3047

rev.	date	issued for	rev.	date	issued for
8			16		
7			15		
6			14		
5			13		
4			12		
3			11		
2	FEB 27.24	PHASE 2 PRE-CONSULT.	10		
1	DEC 21.23	RE-ZONING	9		

project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: ARCHITECTURAL SITE PLAN

project no.: 22-0039
sheet no.: A001

APPENDIX:


NORTH ELEVATION
1 : 200
AVG GRADE (101.78m)
LEGEND
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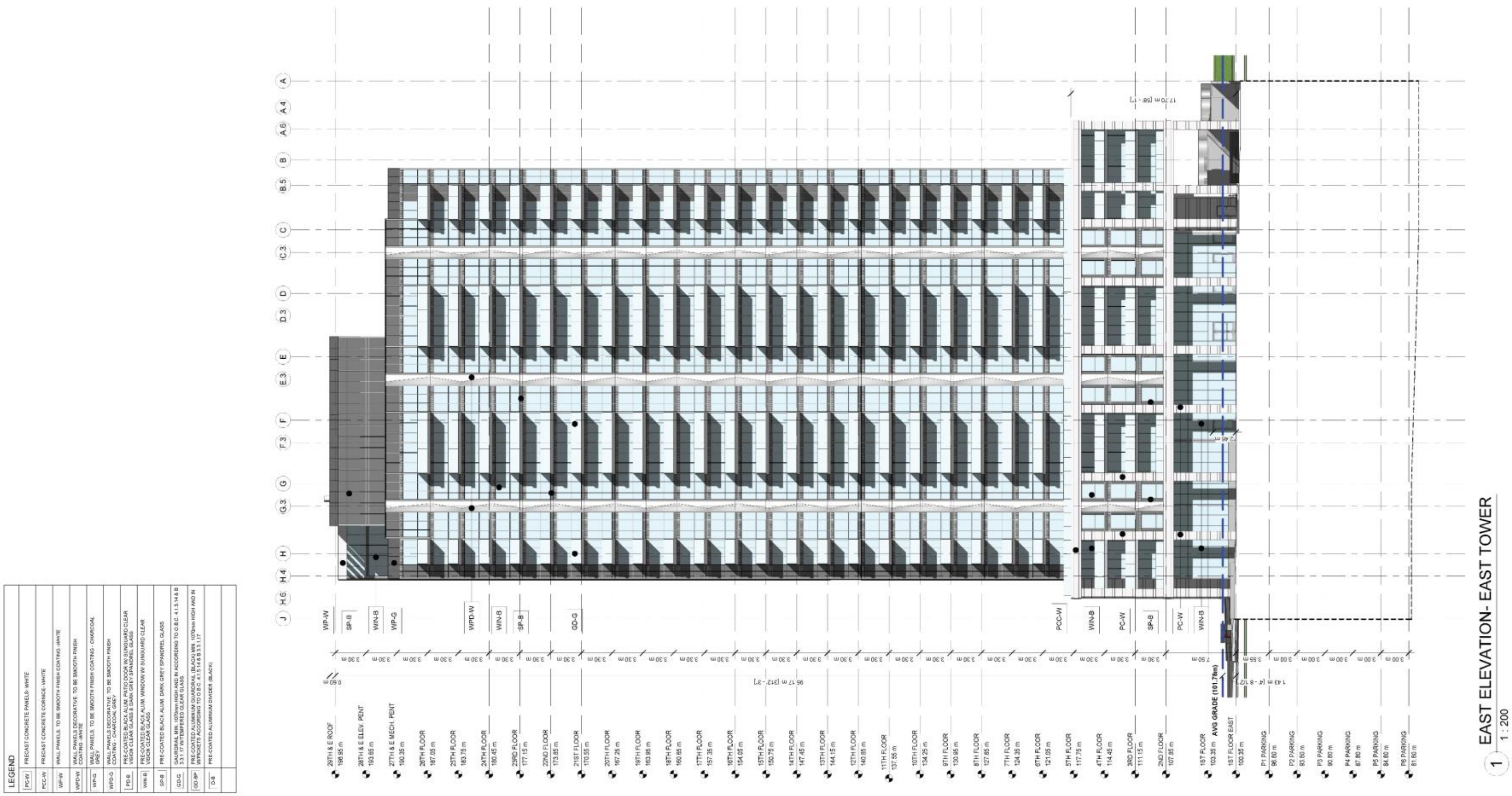
1 DEC 21.23 RE-ZONING
rev. date issued for
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name:
NORTH ELEVATION
project no.:
22-0039
sheet no.:
A401

APPENDIX:



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LICENCE
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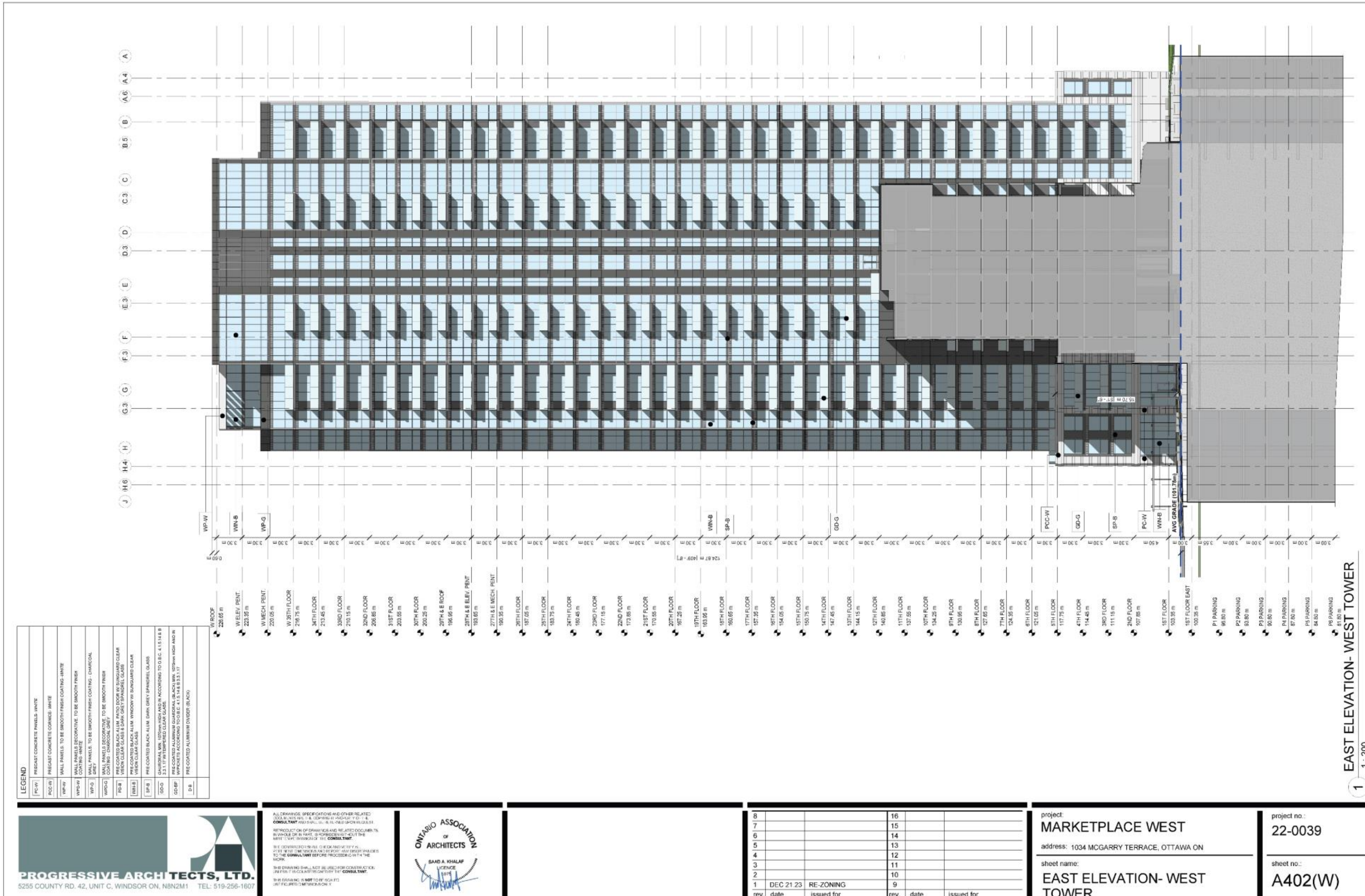
8			16		
7			15		
6			14		
5			13		
4			12		
3			11		
2			10		
1	DEC 21.23	RE-ZONING	9		

project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: EAST ELEVATION- EAST TOWER
project no.: 22-0039
sheet no.: A402(E)

APPENDIX:



EAST ELEVATION- WEST TOWER
1 : 200
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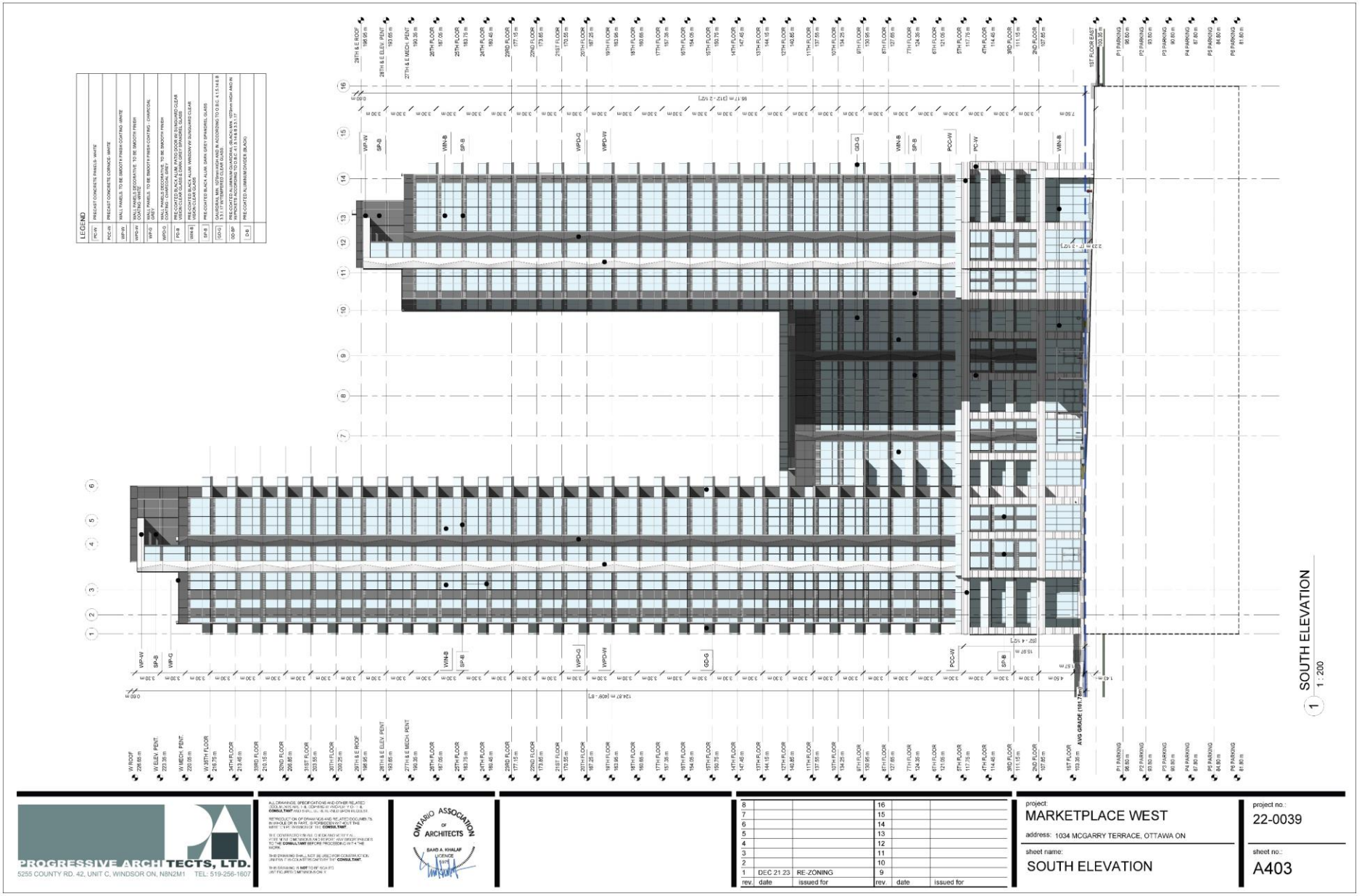
1 DEC 21 23 RE-ZONING
rev. date issued for
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name:
EAST ELEVATION- WEST TOWER
project no.:
22-0039
sheet no.:
A402(W)

APPENDIX:



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7			15		
6			14		
5			13		
4			12		
3			11		
2			10		
1	DEC 21.23	RE-ZONING	9		

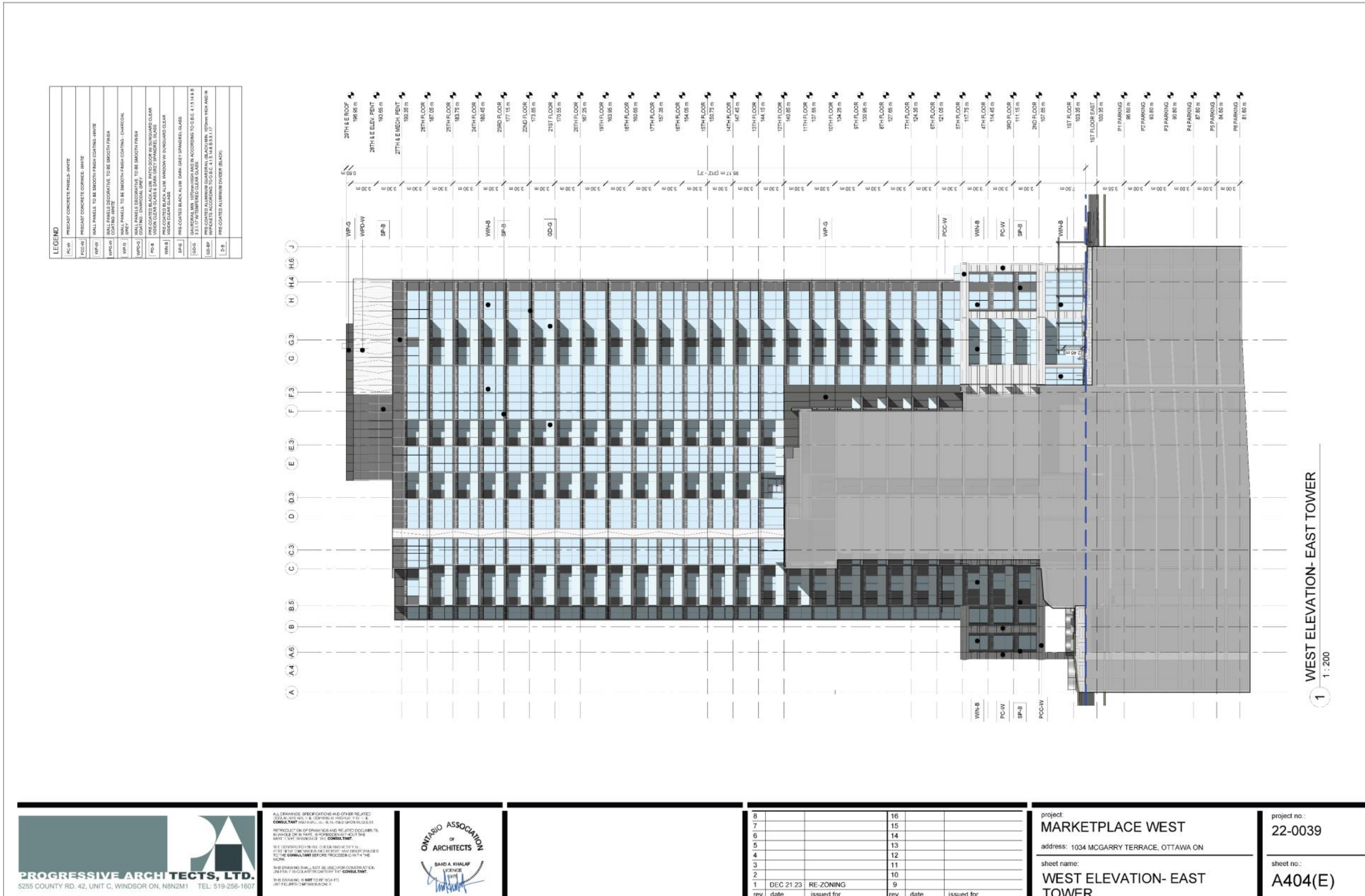
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
SOUTH ELEVATION

project no.:
22-0039

sheet no.:
A403

APPENDIX:


WEST ELEVATION- EAST TOWER
1 : 200
PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607
ONTARIO ASSOCIATION OF ARCHITECTS
SAAD A. KHALAF
1 DEC 21 23 RE-ZONING
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name:
WEST ELEVATION- EAST TOWER
project no.:
22-0039
sheet no.:
A404(E)

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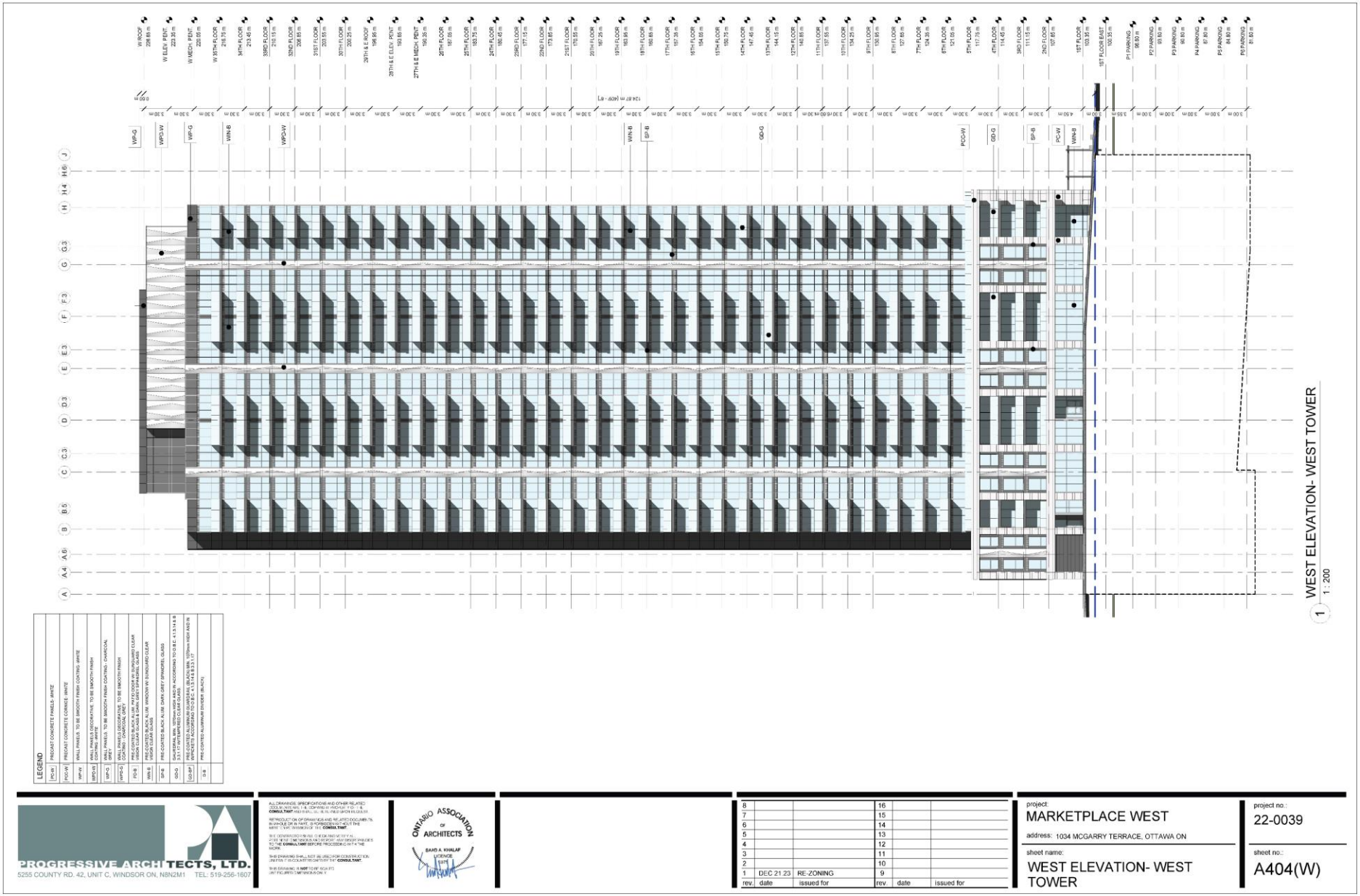
WEST ELEVATION- WEST TOWER
1 : 200
LEGEND
PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607
ONTARIO ASSOCIATION OF ARCHITECTS
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name:
WEST ELEVATION- WEST TOWER
project no.:
22-0039
sheet no.:
A404(W)

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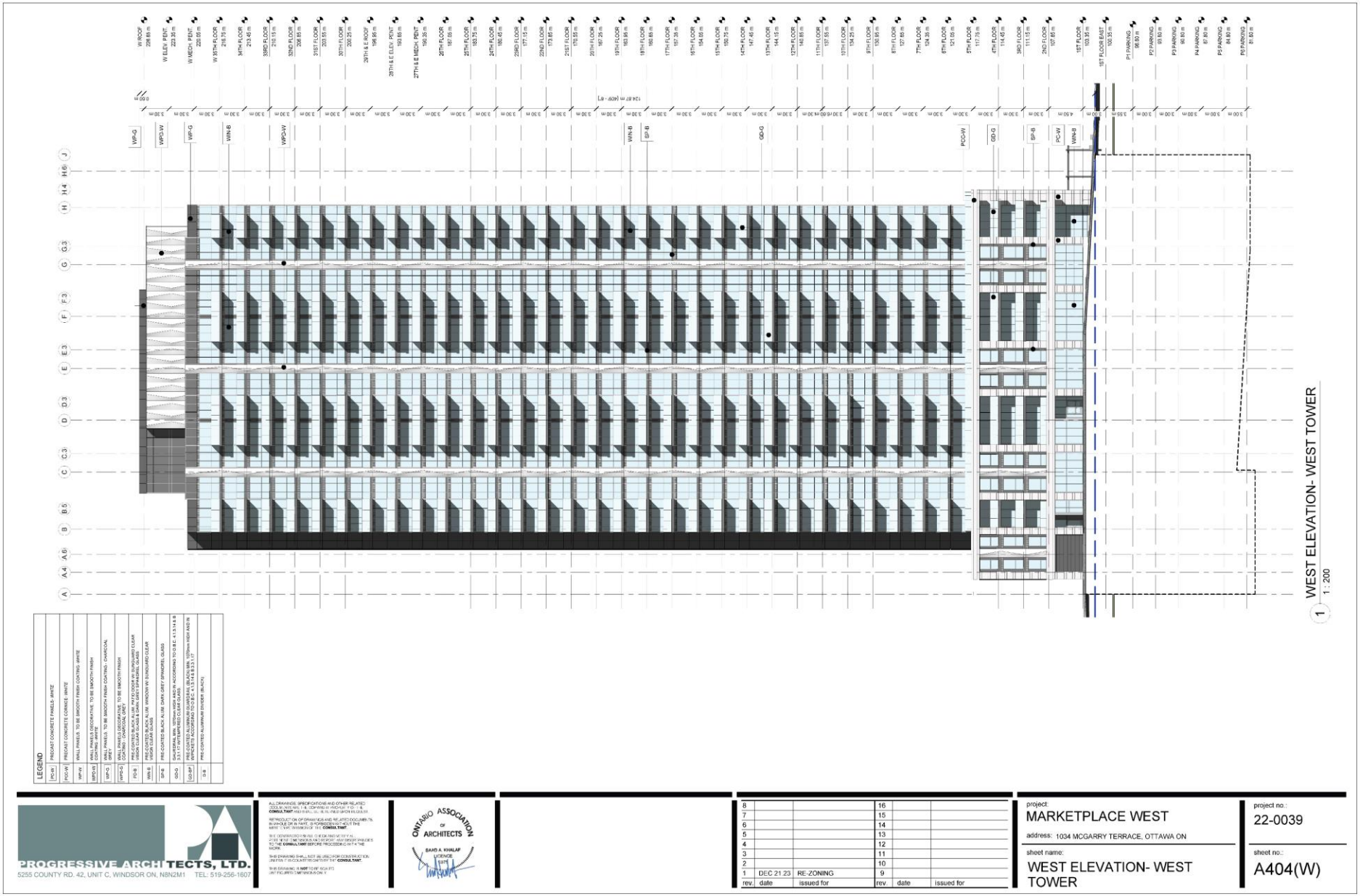
WEST ELEVATION- WEST TOWER
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PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607
ONTARIO ASSOCIATION OF ARCHITECTS
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name:
WEST ELEVATION- WEST TOWER
project no.:
22-0039
sheet no.:
A404(W)

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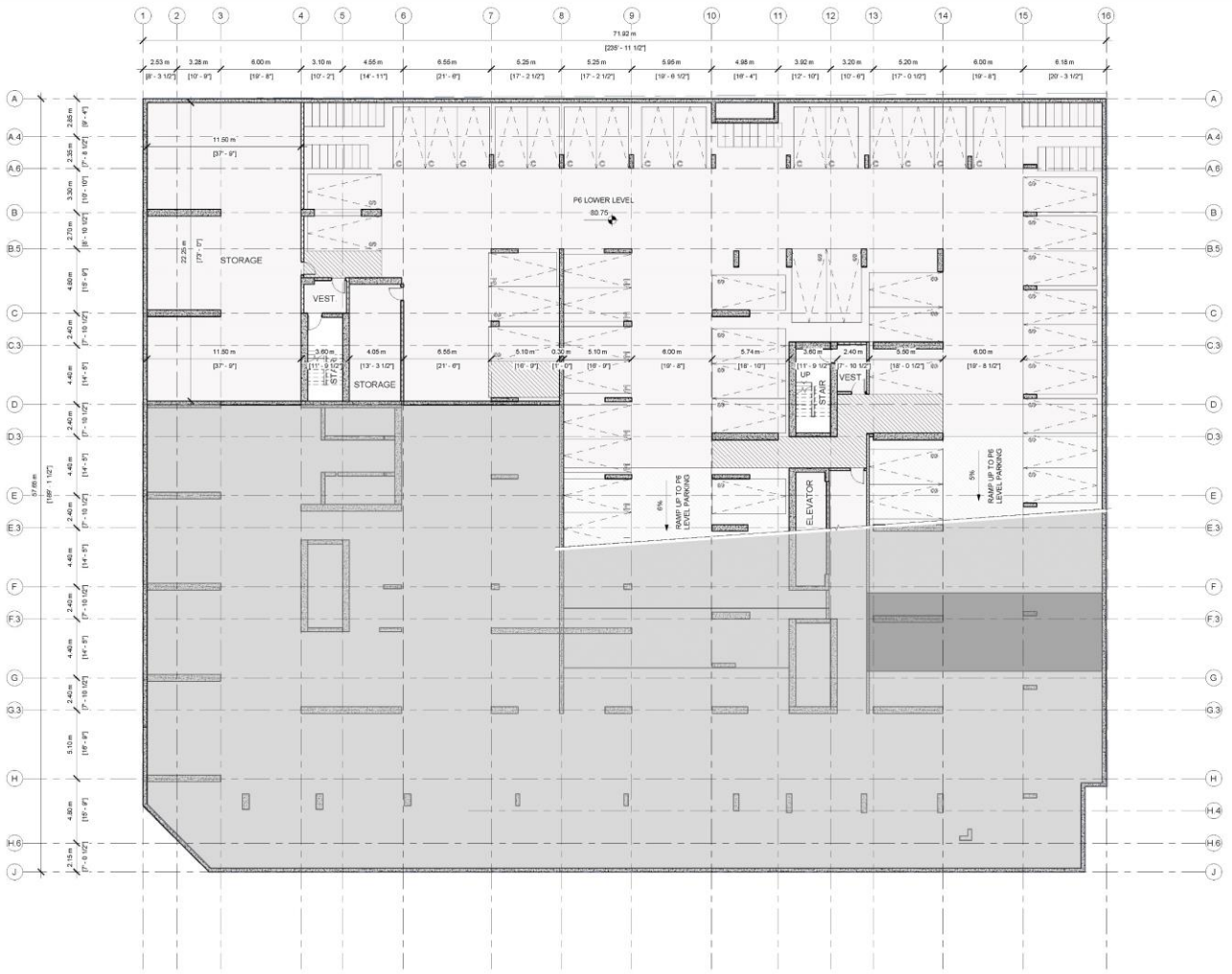

P6 LOWER LEVEL PARKING

VEHICULAR PARKING:

STANDARD	35 SPACES
MIDSIZE	9 SPACES
COMPACT	16 SPACE
TOTAL PARKING	40 TOTAL

BIKE PARKING:

TOTAL PARKING	44 TOTAL

1 P6 LOWER LEVEL
1 : 150

TRUE NORTH PROJECT NORTH

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3			11		
2			10		
1	DEC 21.23	RE-ZONING	9		

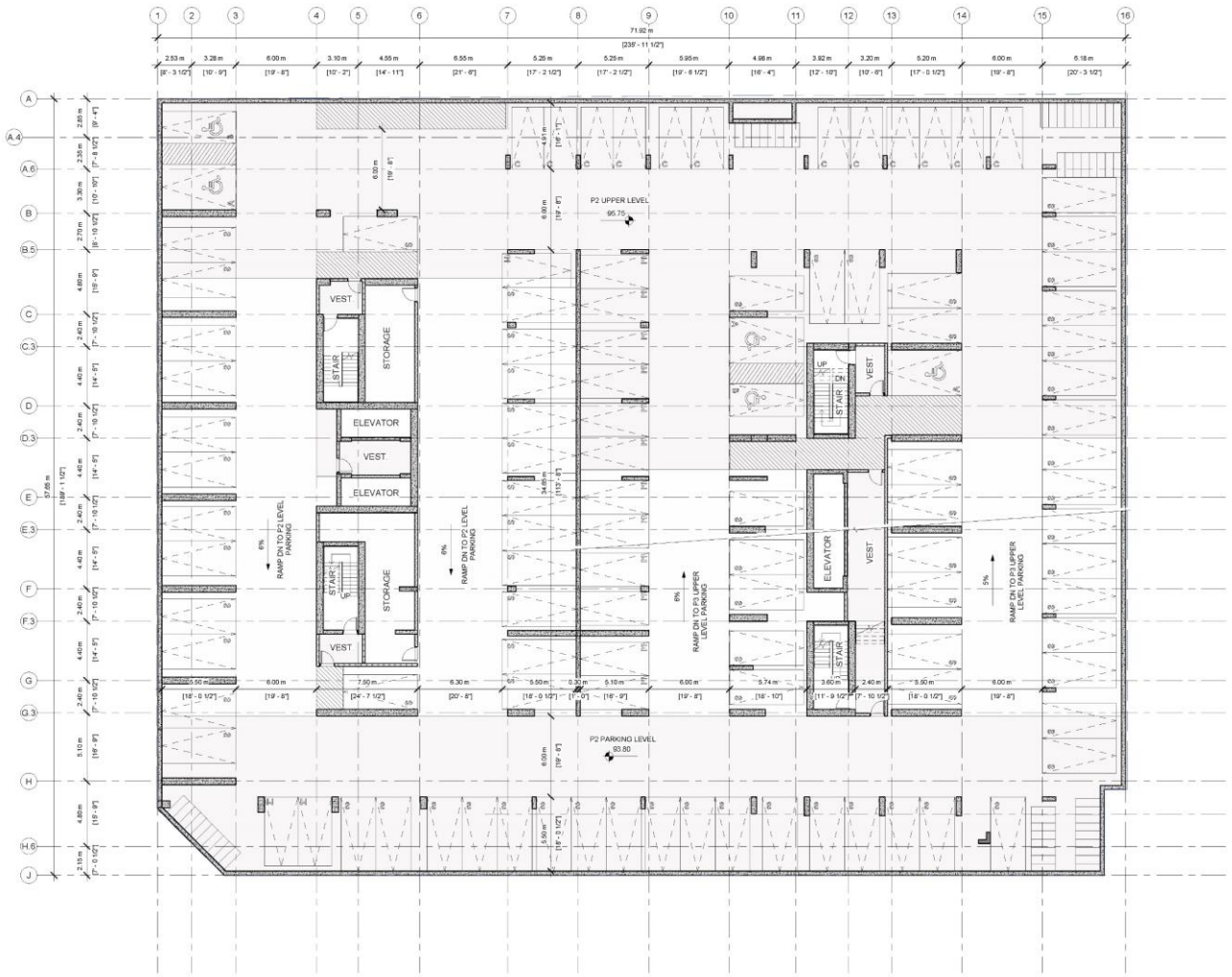
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
P6 LOWER LEVEL

project no.:
22-0039

sheet no.:
A107

APPENDIX:



P2 PARKING LEVEL

VEHICULAR PARKING:

STANDARD	76 SPACES
MIDSIZE	15 SPACES
COMPACT	12 SPACE
TYPE 'A' BARRIER FREE	3 SPACES
TYPE 'B' BARRIER FREE	2 SPACE
TOTAL PARKING	108 TOTAL

BIKE PARKING:

TOTAL PARKING	53 TOTAL

1 P2 PARKING (TYP P2-P6 LEVELS)
1 : 150

TRUE NORTH PROJECT NORTH

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LICENCE

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4			12		
3			11		
2			10		
1	DEC 21.23	RE-ZONING	9		

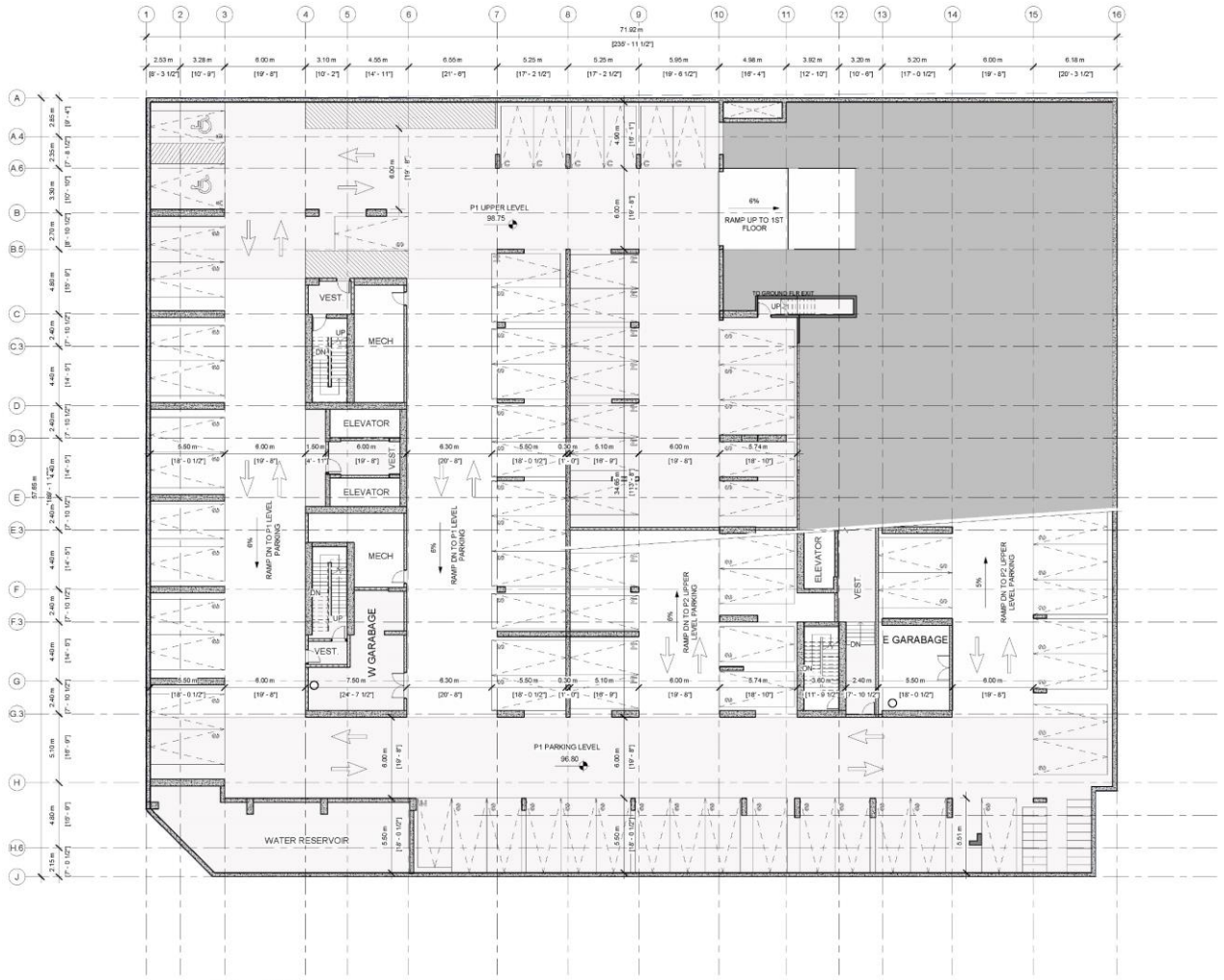
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
P2 PARKING PLAN (TYP)

project no.:
22-0039

sheet no.:
A102

APPENDIX:



1 P1 PARKING PLAN
1 : 150

TRUE NORTH PROJECT NORTH

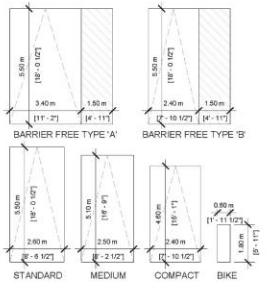
P1 PARKING LEVEL

VEHICULAR PARKING:

STANDARD	51 SPACES
MIDDZE	18 SPACES
COMPACT	6 SPACE
TYPE 'A' BARRIER FREE	1 SPACES
TYPE 'B' BARRIER FREE	1 SPACE
TOTAL PARKING	77 TOTAL

BIKE PARKING:

TOTAL PARKING	17 TOTAL



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LICENCE

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1	DEC 21.23	RE-ZONING	9		

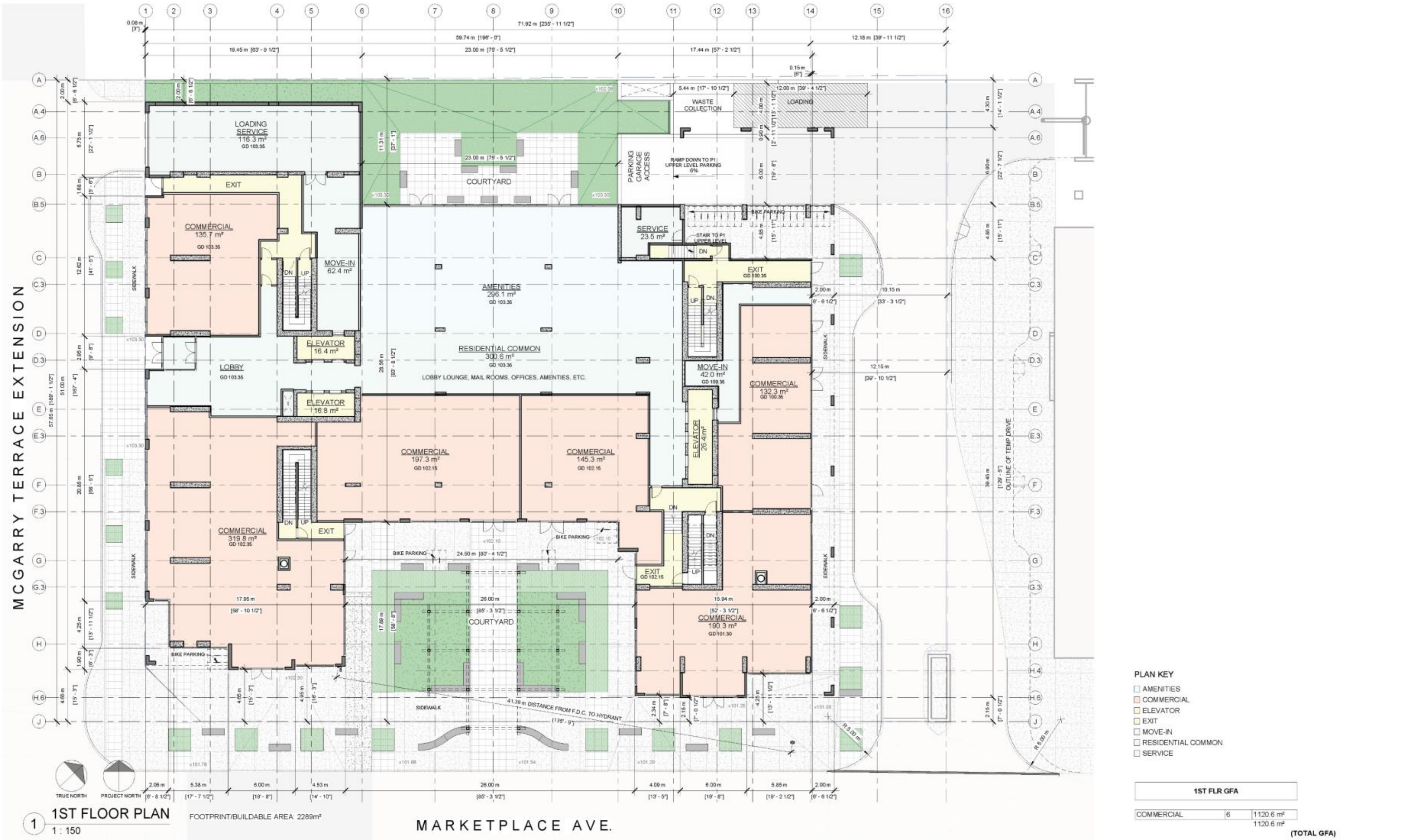
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
P1 PARKING PLAN

project no.:
22-0039

sheet no.:
A101

APPENDIX:



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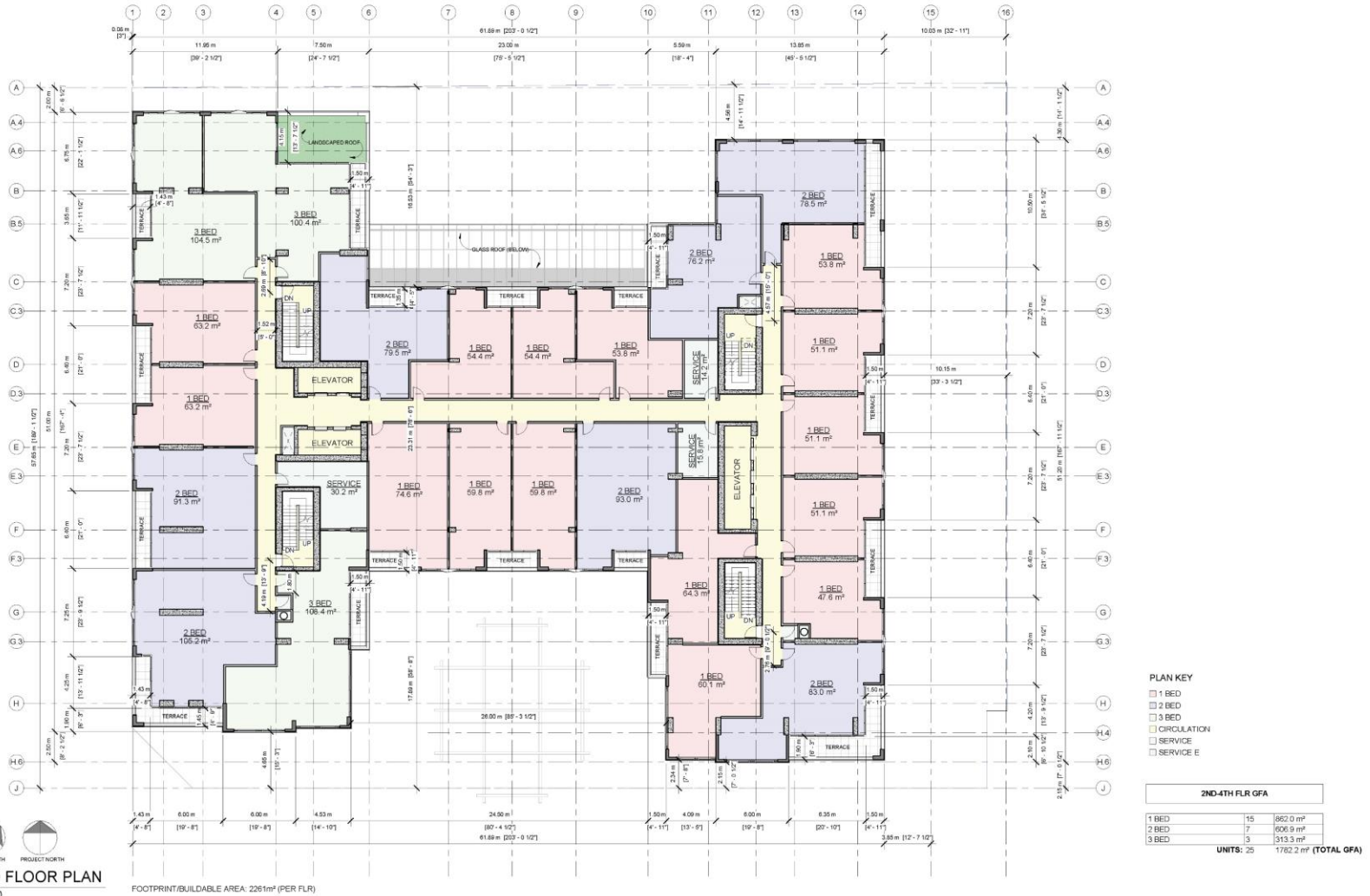
1	DEC 21.23	RE-ZONING	9		

project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: FIRST FLR PLAN
project no.: 22-0039
sheet no.: A201

APPENDIX:



1 2ND FLOOR PLAN
1 : 150

FOOTPRINT/BUILDABLE AREA: 2261m² (PER FLR)

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607

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4			12		
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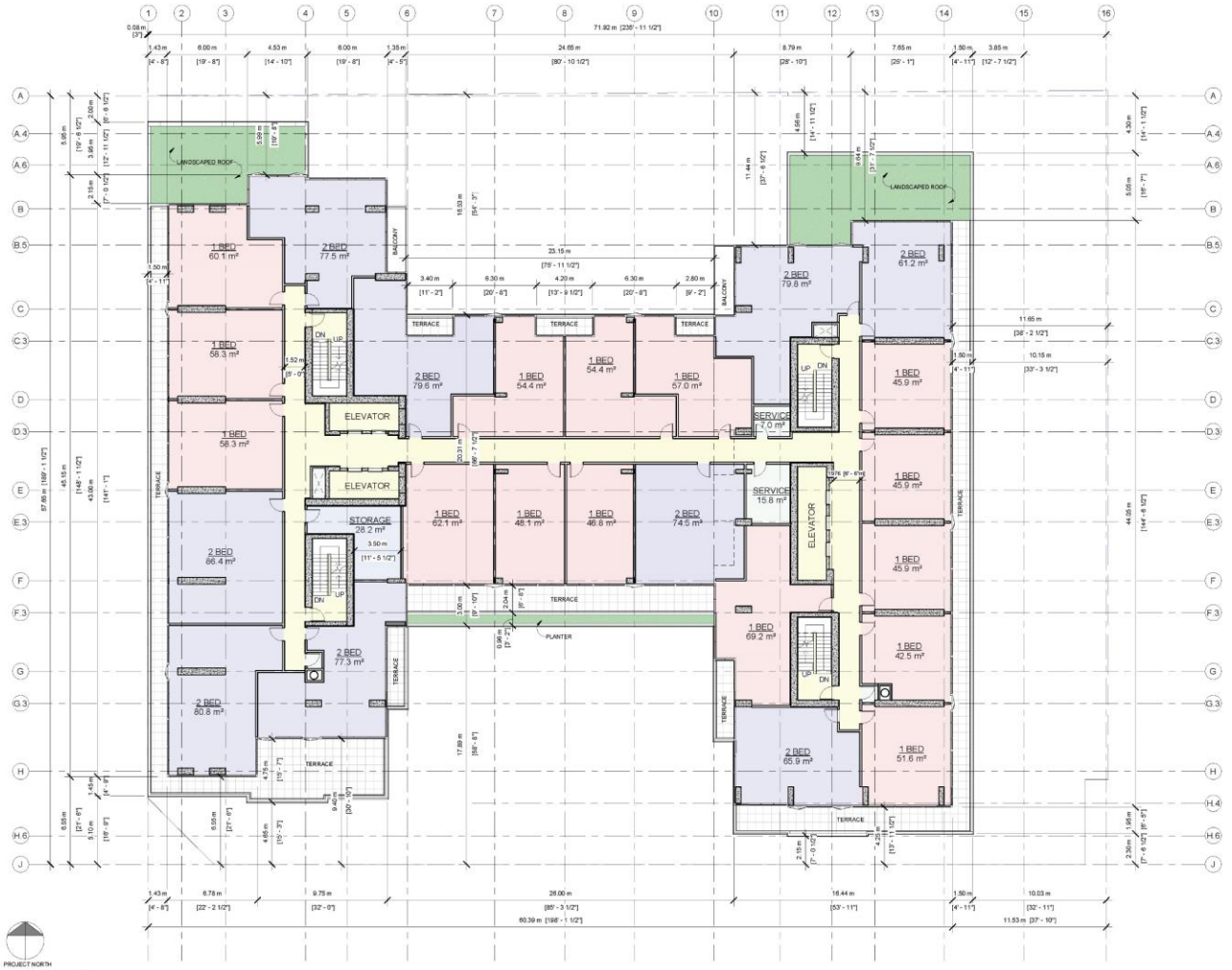
1	DEC 21.23	RE-ZONING	9		

project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: 2ND FLR PLAN
project no.: 22-0039
sheet no.: A202

APPENDIX:



TRUE NORTH PROJECT NORTH

1 5TH FLOOR PLAN
1 : 150

FOOTPRINT/BUILDABLE AREA: 1942m² (PER FLR)

5TH-9TH FLR LEVELS

1 BED	15	800.4 m²
2 BED	9	683.0 m²

UNITS: 24 1483.3 m² **(TOTAL GFA)**

PROGRESSIVE ARCHITECTS, LTD.
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1	DEC 21.23	RE-ZONING	9		

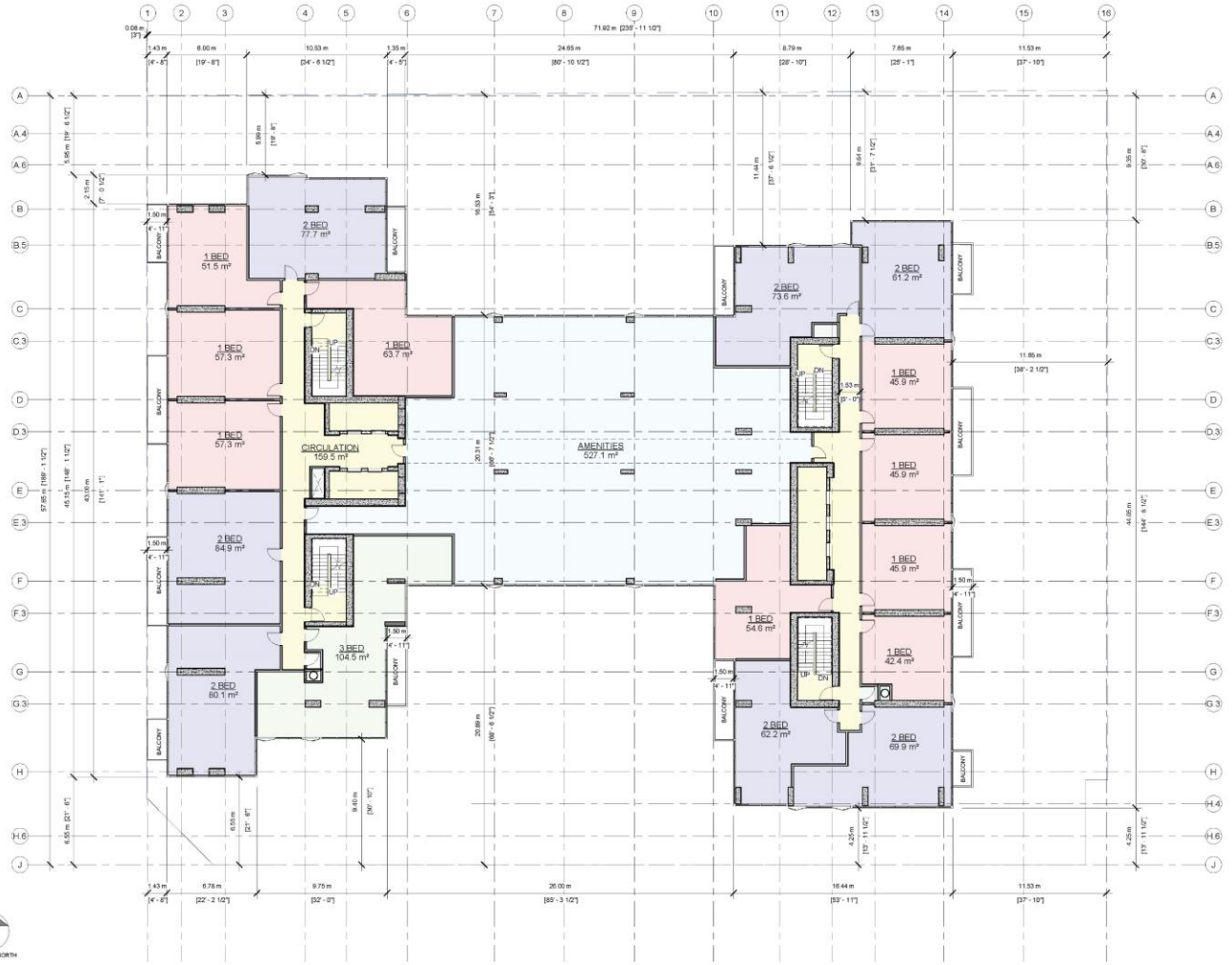
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
5TH FLR PLAN

project no.:
22-0039

sheet no.:
A205

APPENDIX:



PLAN KEY

- 1 BED
- 2 BED
- 3 BED
- AMENITIES
- CIRCULATION
- SERVICE
- SERVICE E

TRUE NORTH PROJECT NORTH

1 10TH FLOOR PLAN
1 : 150

FOOTPRINT/BUILDABLE AREA: 1957m² (PER FLR)

10TH FLR GFA

1 BED	9	464.3 m²
2 BED	7	509.6 m²
3 BED	1	104.5 m²
UNITS:	17	1078.4 m² **(TOTAL GFA)**

PROGRESSIVE ARCHITECTS, LTD.
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LICENCE 3577

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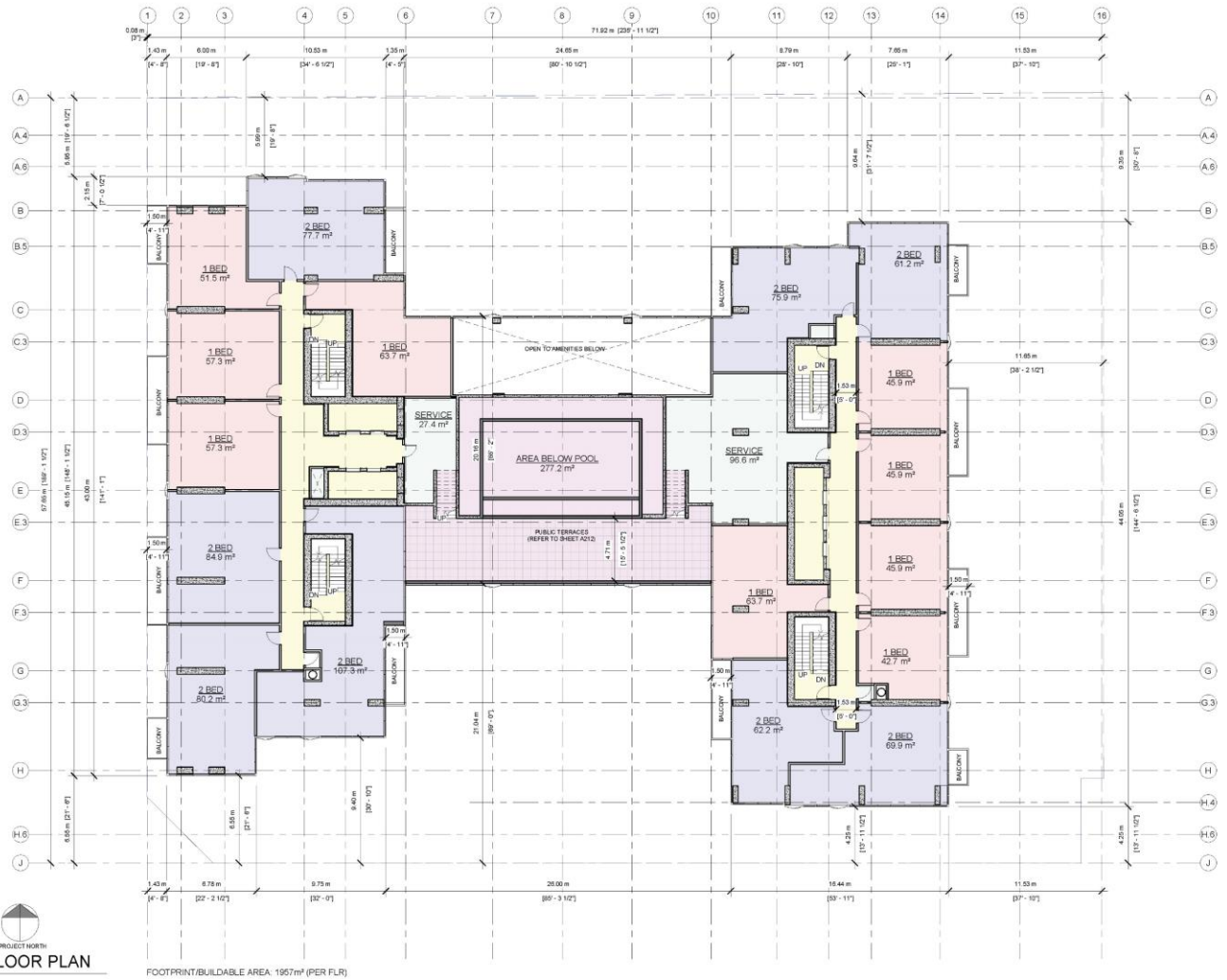
project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: 10TH FLR PLAN

project no.: 22-0039
sheet no.: A210

APPENDIX:



PLAN KEY

- 1 BED
- 2 BED
- AREA BELOW POOL
- CIRCULATION
- SERVICE
- SERVICE E

TRUE NORTH PROJECT NORTH

1 11TH FLOOR PLAN
1 : 150

FOOTPRINT/BUILDABLE AREA: 1957m² (PER FLR)

11TH FLR GFA

1 BED	9	473.8 m²
2 BED	8	619.3 m²

UNITS: 17 1093.1 m² **(TOTAL GFA)**

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SAAD A. KHALAF LICENCE 3079

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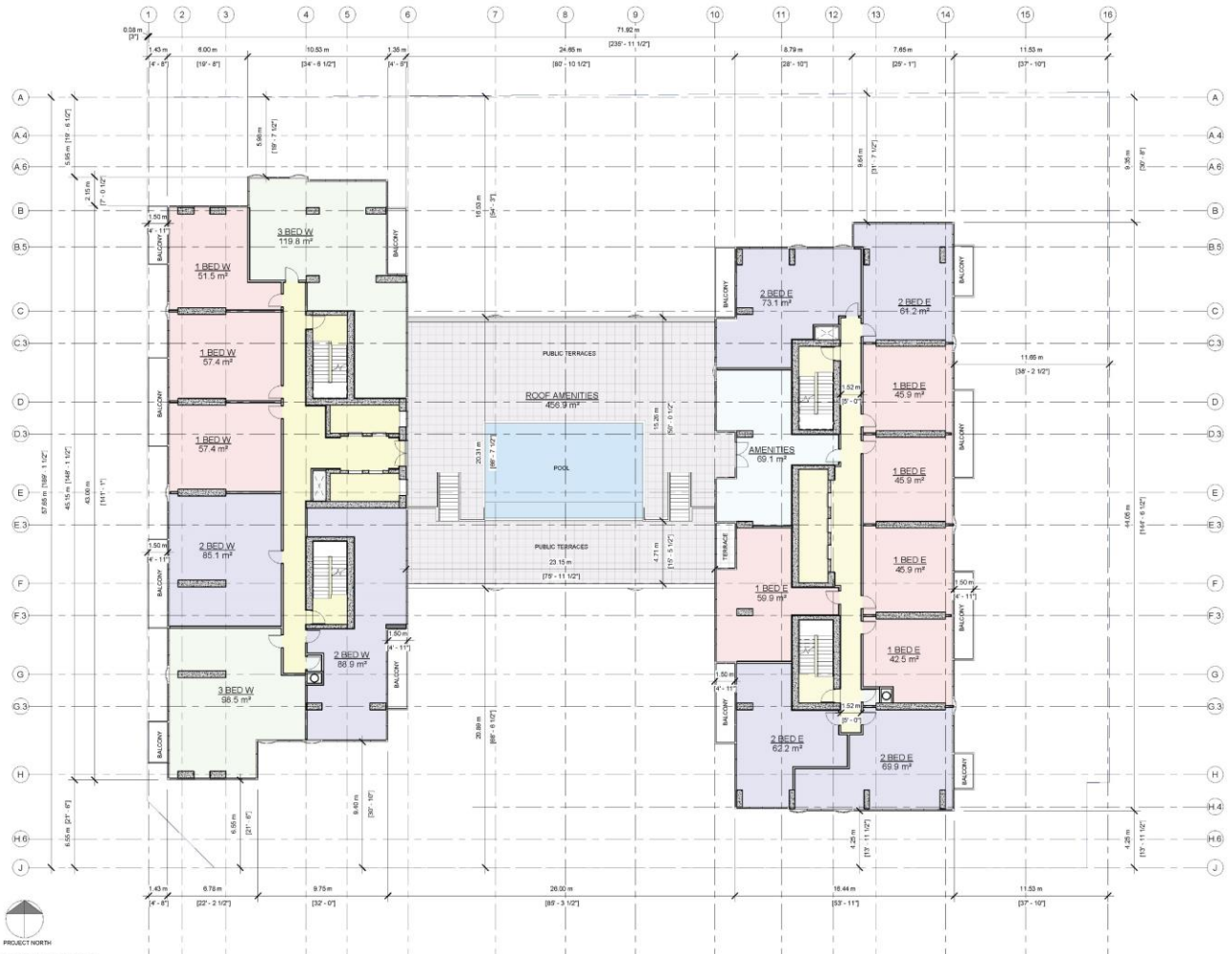
1	DEC 21.23	RE-ZONING	9		

project: MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON
sheet name: 11TH FLR PLAN

project no.: 22-0039
sheet no.: A211

APPENDIX:



1 12TH FLOOR PLAN
1 : 150

WEST TOWER FOOTPRINT/BUILDABLE AREA: 744m² (PER FLR)
WEST TOWER UNITS: 7 PER FLR

EAST TOWER FOOTPRINT/BUILDABLE AREA: 736m² (PER FLR)
EAST TOWER UNITS: 9 PER FLR

12TH FLR GFA

1 BED E	5	240.1 m²
1 BED W	3	166.4 m²
2 BED E	4	266.4 m²
2 BED W	2	174.0 m²
3 BED W	2	218.2 m²
UNITS:	16	1065.1 m² **(TOTAL GFA)**

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1	DEC 21.23	RE-ZONING	9		

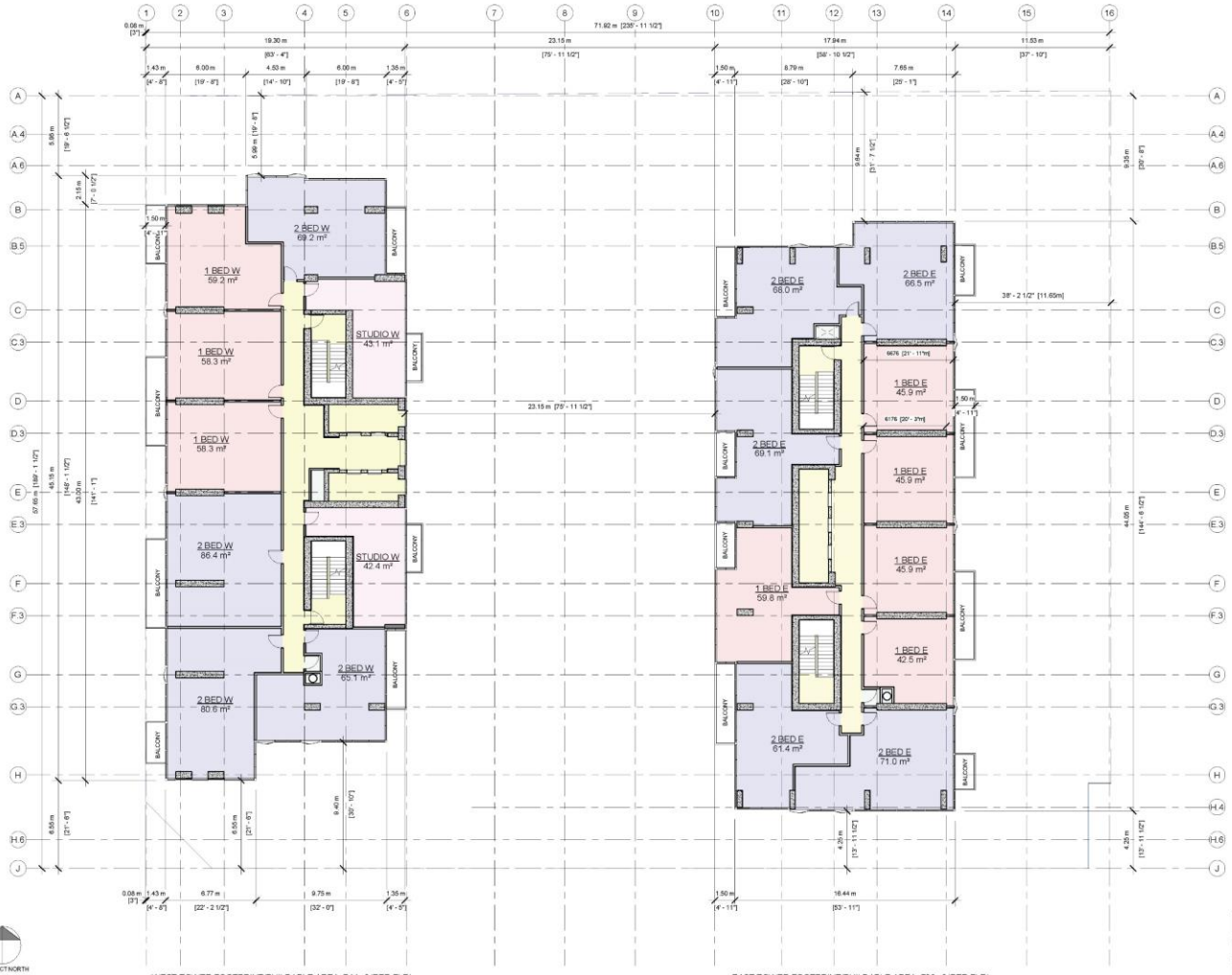
project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
12TH FLR PLAN

project no.:
22-0039

sheet no.:
A212

APPENDIX:



PLAN KEY

- 1 BED E
- 1 BED W
- 2 BED E
- 2 BED W
- CIRCULATION E
- CIRCULATION W
- SERVICE
- SERVICE E
- SERVICE W
- STUDIO W

TRUE NORTH PROJECT NORTH

1 13TH FLOOR PLAN
1 : 150

WEST TOWER FOOTPRINT/BUILDABLE AREA: 744m² (PER FLR)
WEST TOWER UNITS: 9 PER FLR

EAST TOWER FOOTPRINT/BUILDABLE AREA: 736m² (PER FLR)
EAST TOWER UNITS: 10 PER FLR

13TH FLR GFA (TYP TOWER)

1 BED E	5	240.0 m²
1 BED W	3	175.8 m²
2 BED E	5	336.0 m²
2 BED W	4	301.4 m²
STUDIO W	2	85.5 m²

UNITS: 19 1138.8 m² **(TOTAL GFA)**

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BAND A. KHALAF
LICENCE

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project:
MARKETPLACE WEST
address: 1034 MCGARRY TERRACE, OTTAWA ON

sheet name:
13TH FLR PLAN (TYPICAL TOWER)

project no.:
22-0039

sheet no.:
A213

APPENDIX:

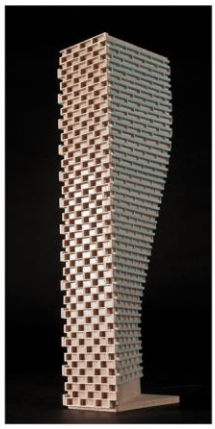
WIND ANALYSIS

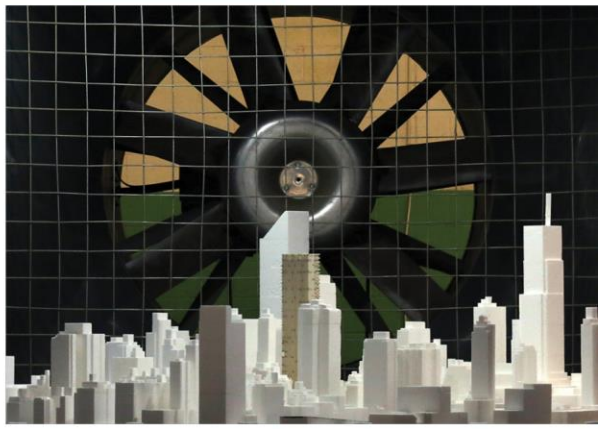
GRADIENTWIND
ENGINEERS & SCIENTISTS

PEDESTRIAN LEVEL WIND STUDY

1034 McGarry Terrace
Ottawa, Ontario

Report: 23-059-PLW





January 26, 2024

PREPARED FOR

Katasa Groupe + Developpement
69 Rue Jean-Proulx #301
Gatineau, QC J8Z 1W2

PREPARED BY

Omar Rioseco, B.Eng., Junior Wind Scientist
David Huitema, M.Eng., Wind Scientist
Justin Ferraro, P.Eng., Principal

127 WALGREEN ROAD, OTTAWA, ON, CANADA K0A 1L0 | 613 836 0934
GRADIENTWIND.COM

EXECUTIVE SUMMARY

This report describes a pedestrian level wind (PLW) study undertaken to satisfy a concurrent resubmission of the Official Plan Amendment (OPA) and Zoning By-Law Amendment (ZBLA) applications and an initial Site Plan Control application submission for the proposed mixed-use residential development located at 1034 McGarry Terrace in Ottawa, Ontario (hereinafter referred to as "subject site" or "proposed development"). Our mandate within this study is to investigate pedestrian wind conditions within and surrounding the subject site, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

The study involves simulation of wind speeds for selected wind directions in a three-dimensional (3D) computer model using the computational fluid dynamics (CFD) technique, combined with meteorological data integration, to assess pedestrian wind comfort and safety within and surrounding the subject site according to City of Ottawa wind comfort and safety criteria. The results and recommendations derived from these considerations are detailed in the main body of the report (Section 5), illustrated in Figures 3A-9, and summarized as follows:

1) All grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions over surrounding sidewalks, nearby transit stops, existing drive aisle to the east, neighbouring existing surface parking lots, the future extension of McGarry Terrace, drop-off areas, walkways, the resident's courtyard, the open courtyard, and in the vicinity of building access points, are considered acceptable.

2) The common amenity terraces at Levels 11 and 12 were modelled with 1.8-m-tall wind screens along their full perimeters. Wind comfort conditions within the amenity terraces serving the proposed development during the typical use period (that is, May to October, inclusive) and recommendations regarding mitigation are described as follows:

a. **Level 11 Amenity Terrace**: With the noted 1.8-m-tall wind screen, wind comfort conditions are predicted to be suitable for sitting to the east and west of the terrace with conditions suitable for standing central to the terrace. Where conditions are suitable for standing, they are also suitable for sitting for at least 76% of the time, where the target is 80% to achieve the sitting comfort class.

b. **Level 12 Amenity Terrace**: With the noted 1.8-m-tall perimeter wind screen, wind comfort conditions are predicted to be suitable for mostly standing, with conditions suitable for sitting to the west of the terrace and at the northeast corner.

c. To improve comfort levels within the amenity terraces serving the proposed development at Levels 11 and 12, mitigation inboard of the terrace perimeters targeted around sensitive areas is recommended, in combination with taller wind screens (that is, greater than 1.8 m as measured from the local walking surface) along the perimeters of the terraces. This inboard mitigation could take the form of inboard wind screens or other common landscape elements.

d. The extent of the mitigation measures is dependent on the programming of the terraces. An appropriate mitigation strategy will be developed in collaboration with the building and landscape architects as the design of the proposed development.

3) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

TABLE OF CONTENTS

1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Katasa Groupe + Developpement to undertake a pedestrian level wind (PLW) study to satisfy a concurrent resubmission of the Official Plan Amendment (OPA) and Zoning By-Law Amendment (ZBLA) applications and an initial Site Plan Control applications for the proposed mixed-use residential development located at 1034 McGarry Terrace in Ottawa, Ontario (hereinafter referred to as "subject site" or "proposed development"). Our mandate within this study is to investigate wind conditions within and surrounding the subject site, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

Our work is based on industry standard computer simulations using the computational fluid dynamics (CFD) technique and data analysis procedures, City of Ottawa wind comfort and safety criteria, architectural drawings prepared by Progressive Architects, Ltd. in January 2024, surrounding street layouts and existing and approved future building massing information obtained from the City of Ottawa, as well as recent satellite imagery.

2. TERMS OF REFERENCE

The subject site is located at 1034 McGarry Terrace in Ottawa, situated to the north at the intersection of Marketplace Avenue and Sue Holloway Drive, on a parcel of land bounded by Marketplace Avenue to the southeast, the future McGarry Terrace extension to the southwest, a high-rise building to the northwest, and a high-rise building and a drive aisle the northeast. Throughout this report, Marketplace Avenue is referred to as project south.

The proposed development comprises two towers, the Eastern Tower (26 storeys) and the Western Tower (35 storeys), rising above a common 11-storey podium comprising a nominally 'H'-shaped planform, with its short axis-oriented along Marketplace Avenue. The towers share six underground parking levels and are topped with a mechanical penthouse (MPH).

Above the underground parking, the ground floor includes commercial units along the east and south elevations, a residential main entrance to the west, a commercial unit and a loading area at the northwest corner, indoor amenities to the north, and a loading area at the northeast corner. Drop-off areas are

located to the east and west of the subject site, a resident's courtyard is located to the north, and an open courtyard is located to the south. Access to underground parking is provided by a ramp near the northeast corner via the drive aisle to the east from Marketplace Avenue. At Level 2, the building steps back central from the north elevation and extends at the northeast corner. Levels 2-9 are reserved for residential use. Private terraces are provided within insets along all elevations at Level 2 and along the north elevation at Level 5. The building steps back from all elevations at Level 5 and private terraces are accommodated within the setbacks from east, south, and west elevations. Level 10 includes central indoor amenities and residential units to the east and west, while Level 11 includes central service spaces and residential units to the east and west. The building steps back from the south elevation at Level 11 to accommodate an outdoor amenity terrace. At Level 12, the Eastern Tower includes indoor amenities to the west and residential units throughout the remainder of the level, while the Western Tower is reserved for residential occupancy. An outdoor amenity terrace is provided between the two towers at this level, with a pool located to the south of the terrace. The Eastern and Western Towers rise with common residential floorplans from Levels 13-26 and 13-35, respectively.

The near-field surroundings, defined as an area within 200-metres (m) of the subject site, include a mid-rise retirement building to the northeast, a school and low-rise residential dwellings to the east, a mix of mid- and high-rise residential buildings from the southeast clockwise to the south, and low-rise commercial buildings from the southwest clockwise to the northwest. Notably, a residential development comprising two towers of 17 and 16 storeys is under construction at 1117 Longfields Drive, to the immediate east of the subject site. The far-field surroundings, defined as an area beyond the near-field but within a 2-kilometre (km) radius of the subject site, are characterized by suburban massing with open exposures of green spaces and fields in all compass directions. The Jock River flows from the southwest to the southeast approximately 1.6 km to the south.

Site plans for the proposed and existing massing scenarios are illustrated in Figures 1A and 1B, while Figures 2A-2H illustrate the computational models used to conduct the study. The existing massing scenario includes the existing massing and any future developments approved by the City of Ottawa.

3. OBJECTIVES

The principal objectives of this study are to (i) determine pedestrian level wind conditions at key areas within and surrounding the development site; (ii) identify areas where wind conditions may interfere with the intended uses of outdoor spaces; and (iii) recommend suitable mitigation measures, where required.

4. METHODOLOGY

The approach followed to quantify pedestrian wind conditions over the site is based on CFD simulations of wind speeds across the subject site within a virtual environment, meteorological analysis of the Ottawa area wind climate, and synthesis of computational data with City of Ottawa wind comfort and safety criteria[1]. The following sections describe the analysis procedures, including a discussion of the noted pedestrian wind criteria.

4.1 Computer-Based Context Modelling

A computer based PLW study was performed to determine the influence of the wind environment on pedestrian comfort over the proposed development site. Pedestrian comfort predictions, based on the mechanical effects of wind, were determined by combining measured wind speed data from CFD simulations with statistical weather data obtained from Ottawa Macdonald-Cartier International Airport. The general concept and approach to CFD modelling is to represent building and topographic details in the immediate vicinity of the subject site on the surrounding model, and to create suitable atmospheric wind profiles at the model boundary. The wind profiles are designed to have similar mean and turbulent wind properties consistent with actual site exposures.

An industry standard practice is to omit trees, vegetation, and other existing and planned landscape elements from the model due to the difficulty of providing accurate seasonal representation of vegetation. The omission of trees and other landscaping elements produces slightly stronger wind speeds.

[1] City of Ottawa Terms of References: Wind Analysis
https://documents.ottawa.ca/sites/default/files/torwindanalysis_en.pdf

4.2 Wind Speed Measurements

The PLW analysis was performed by simulating wind flows and gathering velocity data over a CFD model of the site for 12 wind directions. The CFD simulation model was centered on the proposed development, complete with surrounding massing within a radius of 480 m. The process was performed for two context massing scenarios, as noted in Section 2.

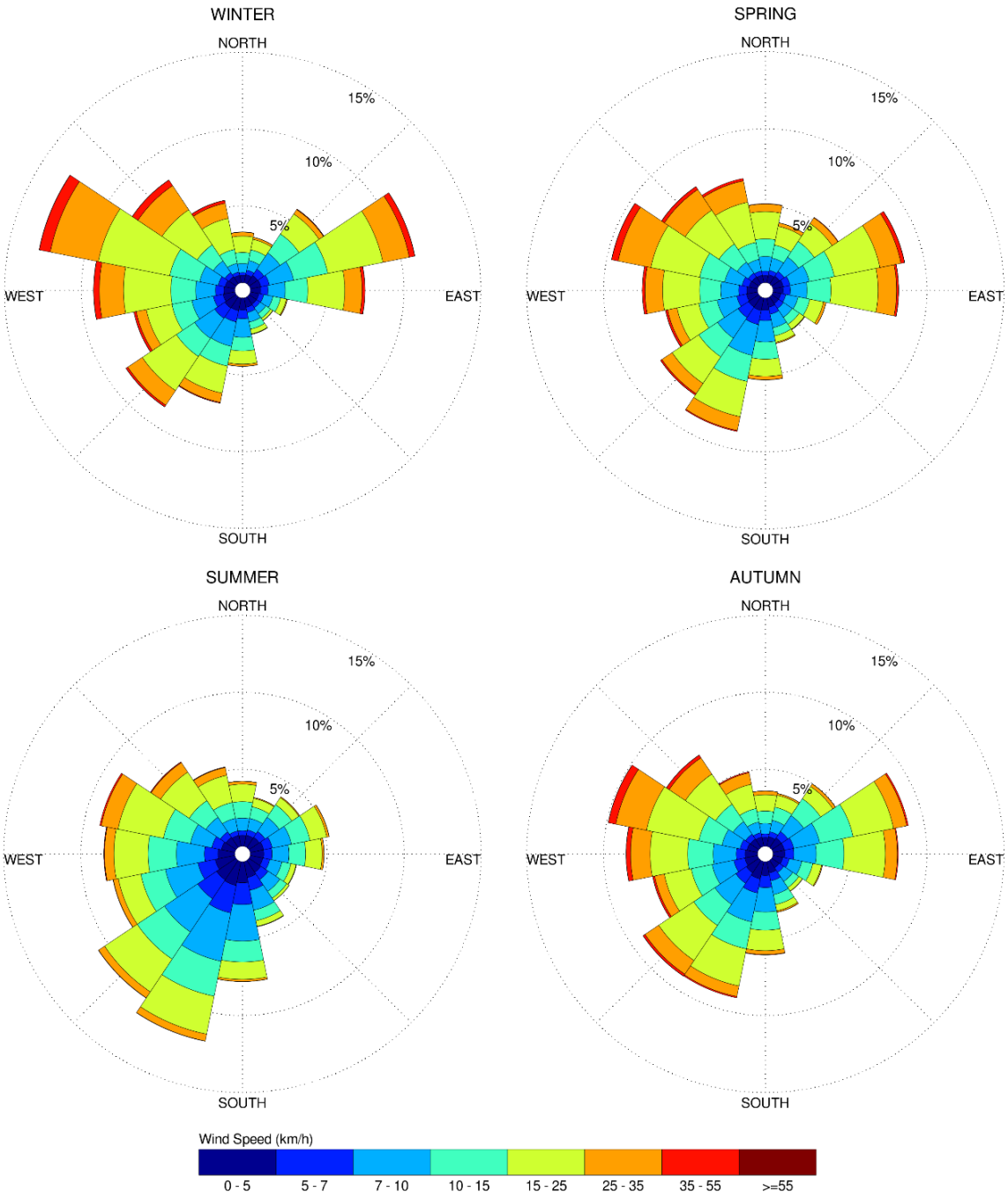
Mean and peak wind speed data obtained over the subject site for each wind direction were interpolated to 36 wind directions at 10° intervals, representing the full compass azimuth. Measured wind speeds approximately 1.5 m above local grade and over the common amenity terraces serving the proposed development were referenced to the wind speed at gradient height to generate mean and peak velocity ratios, which were used to calculate full-scale values. Gradient height represents the theoretical depth of the boundary layer of the earth's atmosphere, above which the mean wind speed remains constant. Further details of the wind flow simulation technique are presented in Appendix A.

4.3 Historical Wind Speed and Direction Data

A statistical model for winds in Ottawa was developed from approximately 40 years of hourly meteorological wind data recorded at Ottawa Macdonald-Cartier International Airport and obtained from Environment and Climate Change Canada. Wind speed and direction data were analyzed for each month of the year to determine the statistically prominent wind directions and corresponding speeds, and to characterize similarities between monthly weather patterns.

The statistical model of the Ottawa area wind climate, which indicates the directional character of local winds on a seasonal basis, is illustrated on the following page. The plots illustrate seasonal distribution of measured wind speeds and directions in kilometers per hour (km/h). Probabilities of occurrence of different wind speeds are represented as stacked polar bars in sixteen azimuth divisions. The radial direction represents the percentage of time for various wind speed ranges per wind direction during the measurement period. The prominent wind speeds and directions can be identified by the longer length of the bars. For Ottawa, the most common winds occur for westerly wind directions, followed by those from the east, while the most common wind speeds are below 36 km/h. The directional prominence and relative magnitude of wind speed changes somewhat from season to season.

SEASONAL DISTRIBUTION OF WIND
OTTAWA MACDONALD-CARTIER INTERNATIONAL AIRPORT



Notes:

1. Radial distances indicate percentage of time of wind events.
2. Wind speeds are mean hourly in km/h, measured at 10 m above the ground.

4.4 Pedestrian Wind Comfort and Safety Criteria – City of Ottawa

Pedestrian wind comfort and safety criteria are based on the mechanical effects of wind without consideration of other meteorological conditions (that is, temperature and relative humidity). The comfort criteria assume that pedestrians are appropriately dressed for a specified outdoor activity during any given season. Five pedestrian comfort classes based on 20% non-exceedance mean wind speed ranges are used to assess pedestrian comfort: (1) Sitting; (2) Standing; (3) Strolling; (4) Walking; and (5) Uncomfortable. The gust speeds, and equivalent mean speeds, are selected based on the Beaufort scale, which describes the effects of forces produced by varying wind speed levels on objects. Wind conditions suitable for sitting are represented by the colour blue, standing by green, strolling by yellow, and walking by orange; uncomfortable conditions are represented by the colour magenta. Specifically, the comfort classes, associated wind speed ranges, and limiting criteria are summarized as follows:

PEDESTRIAN WIND COMFORT CLASS DEFINITIONS

Wind Comfort Class	GEM Speed (km/h)	Description
SITTING	≤ 10	Mean wind speeds no greater than 10 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 16 km/h.
STANDING	≤ 14	Mean wind speeds no greater than 14 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 22 km/h.
STROLLING	≤ 17	Mean wind speeds no greater than 17 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 27 km/h.
WALKING	≤ 20	Mean wind speeds no greater than 20 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 32 km/h.
UNCOMFORTABLE	> 20	Uncomfortable conditions are characterized by predicted values that fall below the 80% target for walking. Brisk walking and exercise, such as jogging, would be acceptable for moderate excesses of this criterion.

Regarding wind safety, the pedestrian safety wind speed criterion is based on the approximate threshold that would cause a vulnerable member of the population to fall. A 0.1% exceedance gust wind speed of 90 km/h is classified as dangerous. From calculations of stability, it can be shown that gust wind speeds of 90 km/h would be the approximate threshold wind speed that would cause an average elderly person in good health to fall. Notably, pedestrians tend to be more sensitive to wind gusts than to steady winds for lower wind speed ranges. For strong winds approaching dangerous levels, this effect is less important because the mean wind can also create problems for pedestrians.

Experience and research on people's perception of mechanical wind effects has shown that if the wind speed levels are exceeded for more than 20% of the time, the activity level would be judged to be uncomfortable by most people. For instance, if a mean wind speed of 10 km/h (equivalent gust wind speed of approximately 16 km/h) were exceeded for more than 20% of the time most pedestrians would judge that location to be too windy for sitting. Similarly, if mean wind speed of 20 km/h (equivalent gust wind speed of approximately 32 km/h) at a location were exceeded for more than 20% of the time, walking or less vigorous activities would be considered uncomfortable. As these criteria are based on subjective reactions of a population to wind forces, their application is partly based on experience and judgment.

Once the pedestrian wind speed predictions have been established throughout the subject site, the assessment of pedestrian comfort involves determining the suitability of the predicted wind conditions for discrete regions within and surrounding the subject site. This step involves comparing the predicted comfort classes to the target comfort classes, which are dictated by the location type for each region (that is, a sidewalk, building entrance, amenity space, or other). An overview of common pedestrian location types and their typical windiest target comfort classes are summarized on the following page. Depending on the programming of a space, the desired comfort class may differ from this table.

TARGET PEDESTRIAN WIND COMFORT CLASSES FOR VARIOUS LOCATION TYPES

Location Types	Comfort Classes
Primary Building Entrance	Standing
Secondary Building Access Point	Walking
Public Sidewalk / Bicycle Path	Walking
Outdoor Amenity Space	Sitting / Standing
Café / Patio / Bench / Garden	Sitting / Standing
Transit Stop (Without Shelter)	Standing
Transit Stop (With Shelter)	Walking
Public Park / Plaza	Sitting / Standing
Garage / Service Entrance	Walking
Parking Lot	Walking
Vehicular Drop-Off Zone	Walking

5. RESULTS AND DISCUSSION

The following discussion of the predicted pedestrian wind conditions for the subject site is accompanied by Figures 3A-6B, illustrating wind conditions at grade level for the proposed and existing massing scenarios, and by Figures 8A-8D, which illustrate conditions over the common amenity terraces serving the proposed development at Levels 11 and 12. Conditions are presented as continuous contours of wind comfort throughout the subject site and correspond to the comfort classes presented in Section 4.4.

Wind comfort conditions are also reported for the typical use period, which is defined as May to October, inclusive. Figures 7 and 9 illustrate comfort conditions at grade level and over the noted common amenity terraces serving the proposed development, respectively, consistent with the comfort classes in Section 4.4. The details of these conditions are summarized in the following pages for each area of interest.

5.1 Wind Comfort Conditions – Grade Level

Drive Aisle East of Subject Site: Following the introduction of the proposed development, conditions over the drive aisle situated to the east of the subject site are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for standing, or better, during the autumn, and suitable for strolling, or better, during the winter and spring. The noted conditions are considered acceptable.

Wind conditions over the noted drive aisle with the existing massing are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for strolling, or better, throughout the remainder of the year, with small, isolated regions suitable for walking during the winter and spring. Notably, the introduction of the proposed development is predicted to improve comfort levels at some areas over the noted drive aisle, in comparison to existing conditions, and wind conditions with the proposed development are considered acceptable.

Sidewalks and Transit Stops along Marketplace Avenue: Following the introduction of the proposed development, conditions over the public sidewalks along Marketplace Avenue are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for strolling, or better, throughout the remainder of the year. Conditions in the vicinity of the nearby eastbound transit stop to the south of Marketplace Avenue are predicted to be suitable for sitting during the summer, becoming suitable for standing, or better, throughout the remainder of the year. Conditions in the vicinity of the nearby westbound transit stop to the southwest of the proposed development are predicted to be suitable for sitting throughout the year.

Wind conditions over the public sidewalks along Marketplace Avenue with the existing massing are predicted to be suitable for a mix of mostly sitting and standing during the summer and autumn, becoming suitable for strolling, or better, during the winter and spring. With the existing massing, conditions in the vicinity of the noted eastbound transit stop are predicted to be suitable for standing, or better, during the spring, summer, and autumn, becoming suitable for a mix of standing and strolling during the winter. Conditions in the vicinity of the westbound transit stop to the southwest of the subject site with the existing massing are predicted to be suitable for sitting during the spring, summer, and autumn, becoming suitable for standing, or better during the winter.

While the introduction of the proposed development produces windier conditions over Marketplace Avenue, conditions over the nearby transit stops are predicted to improve in comparison to existing conditions, and conditions with the proposed development are nevertheless considered acceptable.

Sidewalks along Sue Holloway Drive: Following the introduction of the proposed development, conditions over the public sidewalks along Sue Holloway Drive are predicted to be suitable for mostly sitting during the summer, becoming suitable for mostly standing, or better, throughout the remainder of the year. The noted conditions are considered acceptable.

Wind conditions over the public sidewalks along Sue Holloway Drive with the existing massing are predicted to be suitable for sitting during summer, becoming suitable for standing, or better, throughout the remainder of the year. While the introduction of the proposed development produces windier conditions in comparison to existing conditions, wind comfort conditions are nevertheless considered acceptable.

Neighbouring Existing Surface Parking Lots Southwest of Subject Site: Following the introduction of the proposed development, conditions over the neighbouring existing surface parking lots situated to the southwest of the subject site are predicted to be suitable for sitting during the summer, becoming suitable for a mix of sitting and standing throughout the remainder of the year. The noted conditions are considered acceptable.

Wind conditions over the noted parking lots with the existing massing are predicted to be suitable for sitting during the summer, becoming suitable for standing, or better, during the remaining seasons. While the introduction of the proposed development produces slightly windier conditions in comparison to existing conditions, wind comfort conditions are nevertheless considered acceptable.

Sidewalks along Future McGarry Terrace Extension West of Subject Site: Conditions over the public sidewalks along the future extension of McGarry Terrace along the west elevation of the subject site are predicted to be suitable for standing, or better, during the summer, becoming suitable for a mix of standing and strolling throughout the remainder of the year, with an isolated region suitable for walking at the intersection of the future extension of McGarry Terrace and Marketplace Avenue. The noted conditions are considered acceptable.

Sidewalks along McGarry Terrace: Following the introduction of the proposed development, conditions over the public sidewalks along McGarry Terrace are predicted to be suitable for a mix of sitting and standing during the summer and autumn, becoming suitable for strolling, or better, during the winter and spring. The noted conditions are considered acceptable.

Wind conditions over the public sidewalks along McGarry Terrace with the existing massing are predicted to be suitable for suitable for standing, or better, throughout the year. While the introduction of the proposed development produces windier conditions in comparison to existing conditions, wind comfort conditions are nevertheless considered acceptable.

Resident's Courtyard and Open Courtyard: During the typical use period, wind conditions within the resident's courtyard and the open courtyard situated to the north and south of the subject site, respectively, are predicted to be suitable for sitting, as illustrated in Figure 7. The noted conditions are considered acceptable.

Drop-off Areas and Walkways Within Subject Site: Wind conditions over the drop-off area to the east of the subject site are predicted to be suitable for mostly sitting during the summer, becoming suitable for standing throughout the remainder of the year, while conditions over the drop-off area to the west of the subject site are predicted to be suitable for standing during the summer, becoming suitable for a mix of standing and strolling throughout the remainder of the year. Conditions over the walkways within the subject site are predicted to be suitable for standing, or better, during the summer, becoming suitable for mostly strolling, or better, throughout the remainder of the year. The noted conditions are considered acceptable.

Building Access Points: Wind conditions in the vicinity of the building access points serving the proposed development are predicted to be suitable for sitting during the summer, becoming suitable for standing, or better, throughout the remainder of the year. The noted conditions are considered acceptable.

5.2 Wind Comfort Conditions – Common Amenity Terraces

The common amenity terraces at Levels 11 and 12 were modelled with 1.8-m-tall wind screens along their full perimeters. Wind comfort conditions during the typical use period within the common amenity terraces serving the proposed development and recommendations regarding mitigation are described as follows:

Level 11 Amenity Terrace: With the noted wind mitigation along the terrace perimeter as described in the introductory paragraph, conditions within the common amenity terrace serving the proposed development at Level 11 are predicted to be suitable for sitting to the east and west of the terrace with conditions predicted to be suitable for standing central to the terrace, as illustrated in Figure 9. Where conditions are suitable for standing, they are also suitable for sitting for at least 76% of the time, where the target is 80% to achieve the sitting comfort class.

Level 12 Amenity Terrace: With the noted wind mitigation along the terrace perimeter as described in the introductory paragraph, conditions within the common amenity terrace serving the proposed development at Level 12 are predicted to be suitable for mostly standing, with conditions predicted to be suitable for sitting to the west of the terrace and at the northeast corner, as illustrated in Figure 9.

To improve comfort levels within the amenity terraces serving the proposed development at Levels 11 and 12, mitigation inboard of the terrace perimeters targeted around sensitive areas is recommended, in combination with taller wind screens (that is, greater than 1.8 m as measured from the local walking surface) along the perimeters of the terraces. This inboard mitigation could take the form of inboard wind screens or other common landscape elements.

The extent of the mitigation measures is dependent on the programming of the terraces. An appropriate mitigation strategy will be developed in collaboration with the building and landscape architects as the design of the proposed development progresses.

5.3 Wind Safety

Within the context of typical weather patterns, which exclude anomalous localized storm events such as tornadoes and downbursts, no pedestrian areas within or surrounding the subject site are expected to experience conditions that could be considered dangerous, as defined in Section 4.4.

5.4 Applicability of Results

Pedestrian wind comfort and safety have been quantified for the specific configuration of existing and foreseeable construction around the subject site. Future changes (that is, construction or demolition) of these surroundings may cause changes to the wind effects in two ways, namely: (i) changes beyond the immediate vicinity of the subject site would alter the wind profile approaching the subject site; and (ii) development in proximity to the subject site would cause changes to local flow patterns.

6. CONCLUSIONS AND RECOMMENDATIONS

A complete summary of the predicted wind conditions is provided in Section 5 and illustrated in Figures 3A-9. Based on computer simulations using the CFD technique, meteorological data analysis of the Ottawa wind climate, City of Ottawa wind comfort and safety criteria, and experience with numerous similar developments, the study concludes the following:

1) All grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions over surrounding sidewalks, nearby transit stops, existing drive aisle to the east, neighbouring existing surface parking lots, the future extension of McGarry Terrace, drop-off areas, walkways, the resident's courtyard, the open courtyard, and in the vicinity of building access points, are considered acceptable.

2) The common amenity terraces at Levels 11 and 12 were modelled with 1.8-m-tall wind screens along their full perimeters. Wind comfort conditions within the amenity terraces serving the proposed development during the typical use period (that is, May to October, inclusive) and recommendations regarding mitigation are described as follows:

    a. **Level 11 Amenity Terrace**: With the noted 1.8-m-tall wind screen, wind comfort conditions are predicted to be suitable for sitting to the east and west of the terrace with conditions suitable for standing central to the terrace. Where conditions are suitable for standing, they are also suitable for sitting for at least 76% of the time, where the target is 80% to achieve the sitting comfort class.

b. **Level 12 Amenity Terrace**: With the noted 1.8-m-tall perimeter wind screen, wind comfort conditions are predicted to be suitable for mostly standing, with conditions suitable for sitting to the west of the terrace and at the northeast corner.

c. To improve comfort levels within the amenity terraces serving the proposed development at Levels 11 and 12, mitigation inboard of the terrace perimeters targeted around sensitive areas is recommended, in combination with taller wind screens (that is, greater than 1.8 m as measured from the local walking surface) along the perimeters of the terraces. This inboard mitigation could take the form of inboard wind screens or other common landscape elements.

d. The extent of the mitigation measures is dependent on the programming of the terraces. An appropriate mitigation strategy will be developed in collaboration with the building and landscape architects as the design of the proposed development.

3) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

Sincerely,

Gradient Wind Engineering Inc.

David Huitema, M.Eng.
Wind Scientist

Justin Ferraro, P.Eng.
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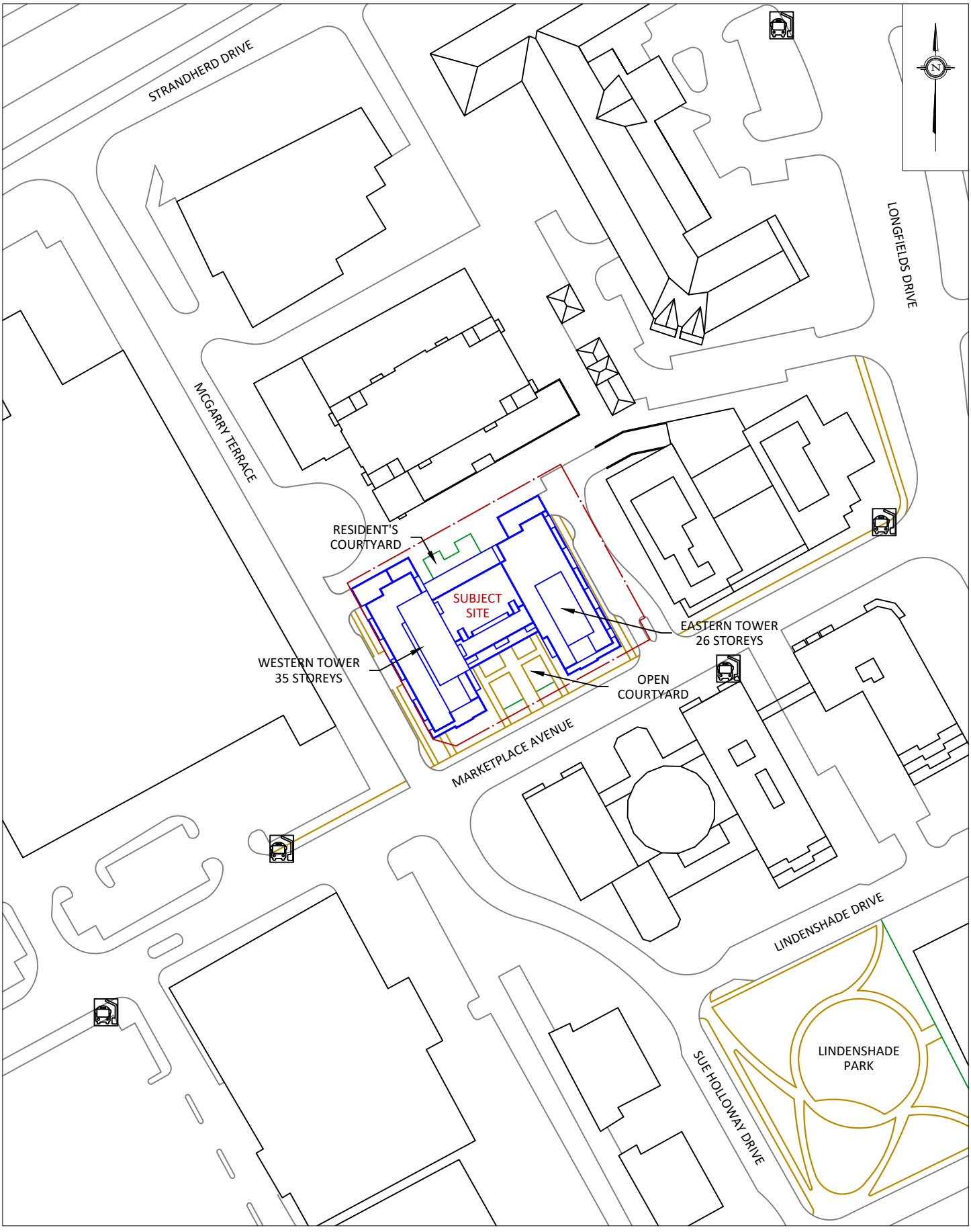
Junior Wind Scientist



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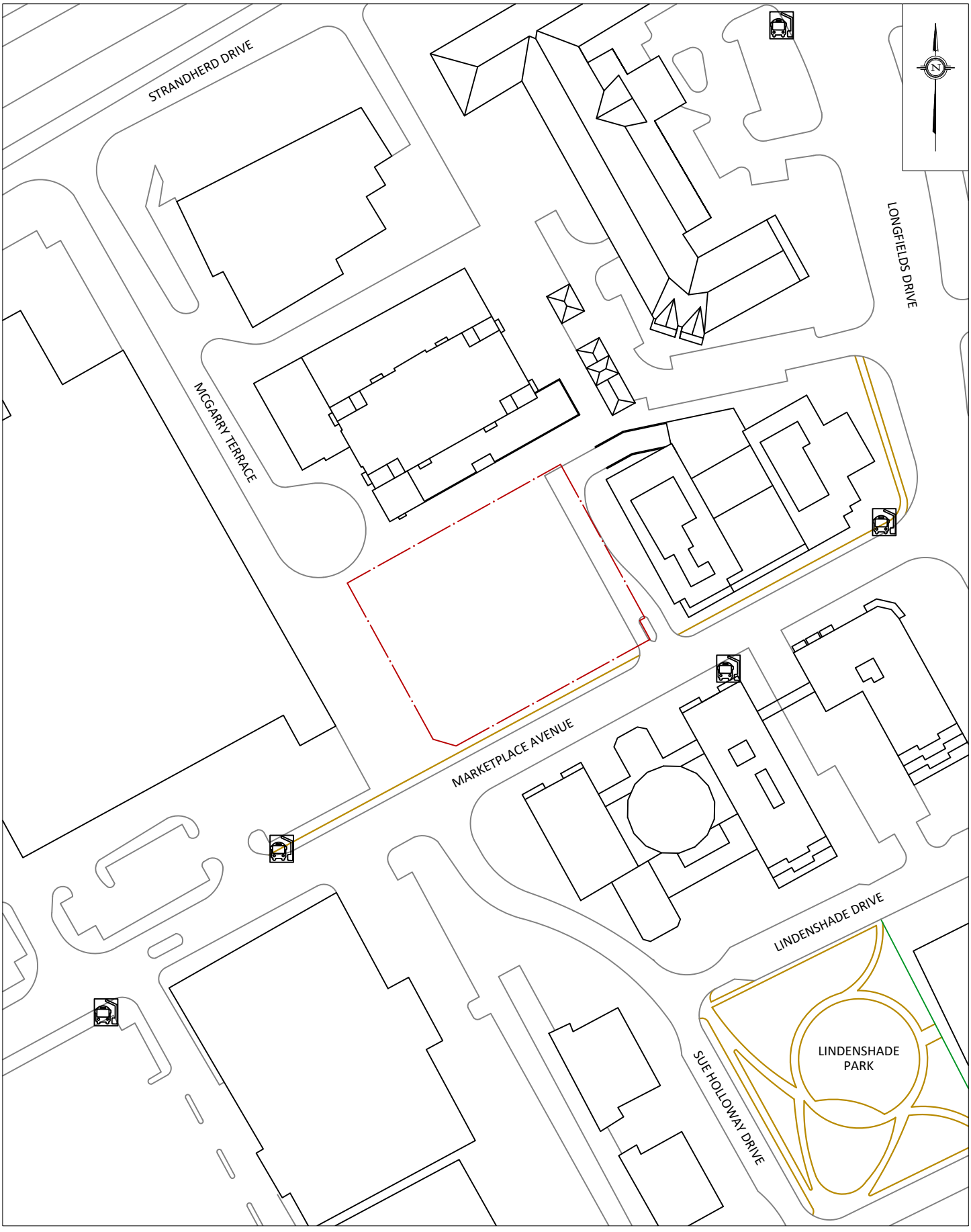
PROJECT	1034 MCGARRY TERRACE, OTTAWA PEDESTRIAN LEVEL WIND STUDY
SCALE	1:1500
DRAWING NO.	23-059-PLW-1A
DATE	JANUARY 26, 2024
DRAWN BY	S.K.

DESCRIPTION

FIGURE 1A:
PROPOSED SITE PLAN AND SURROUNDING CONTEXT



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PROJECT	1034 MCGARRY TERRACE, OTTAWA PEDESTRIAN LEVEL WIND STUDY		DESCRIPTION
SCALE	1:1500	DRAWING NO.	23-059-PLW-1B
DATE	JANUARY 26, 2024	DRAWN BY	S.K.

FIGURE 1B:
EXISTING SITE PLAN AND SURROUNDING CONTEXT

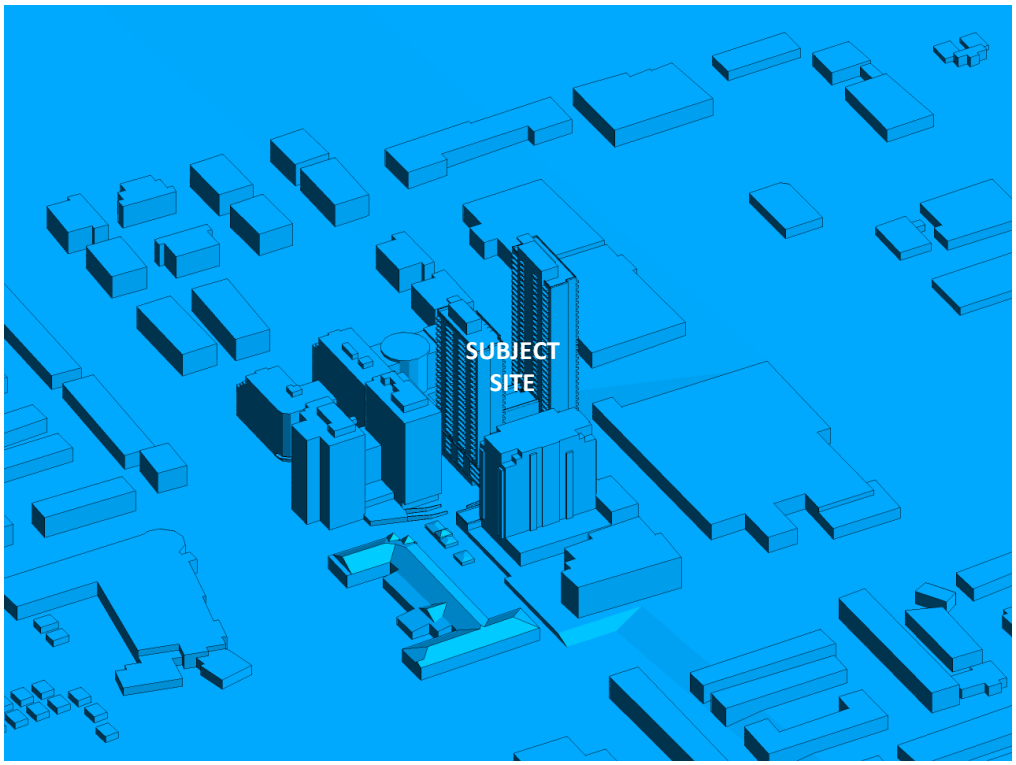


FIGURE 2A: COMPUTATIONAL MODEL, PROPOSED MASSING, NORTH PERSPECTIVE

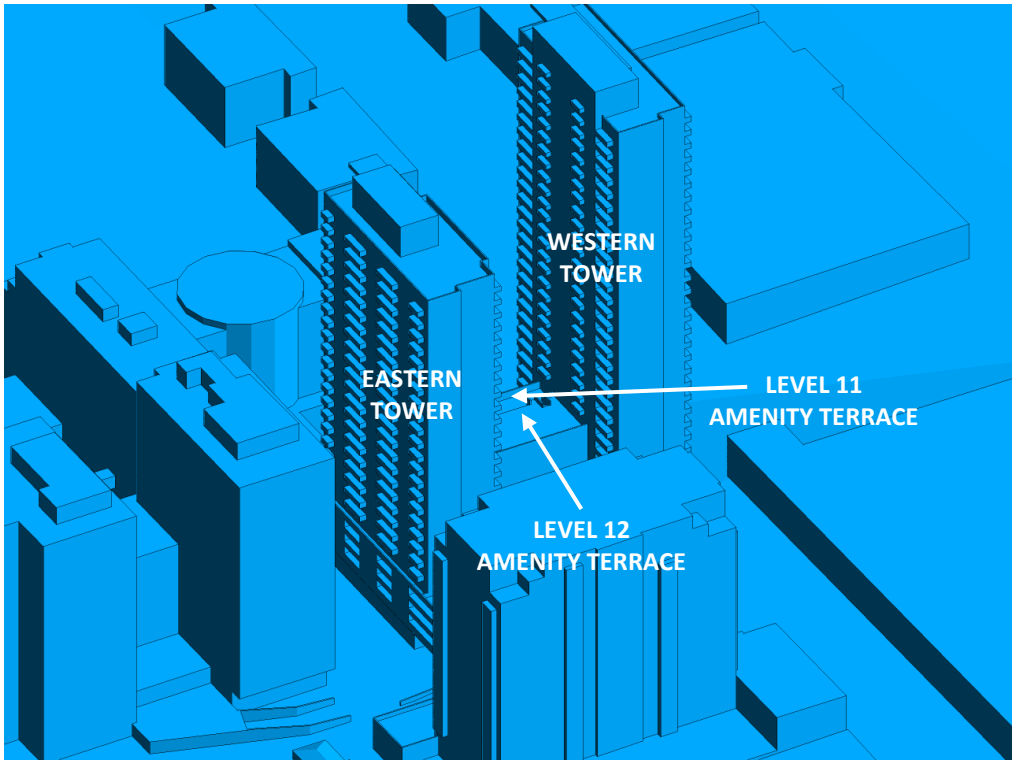


FIGURE 2B: CLOSE UP OF FIGURE 2A

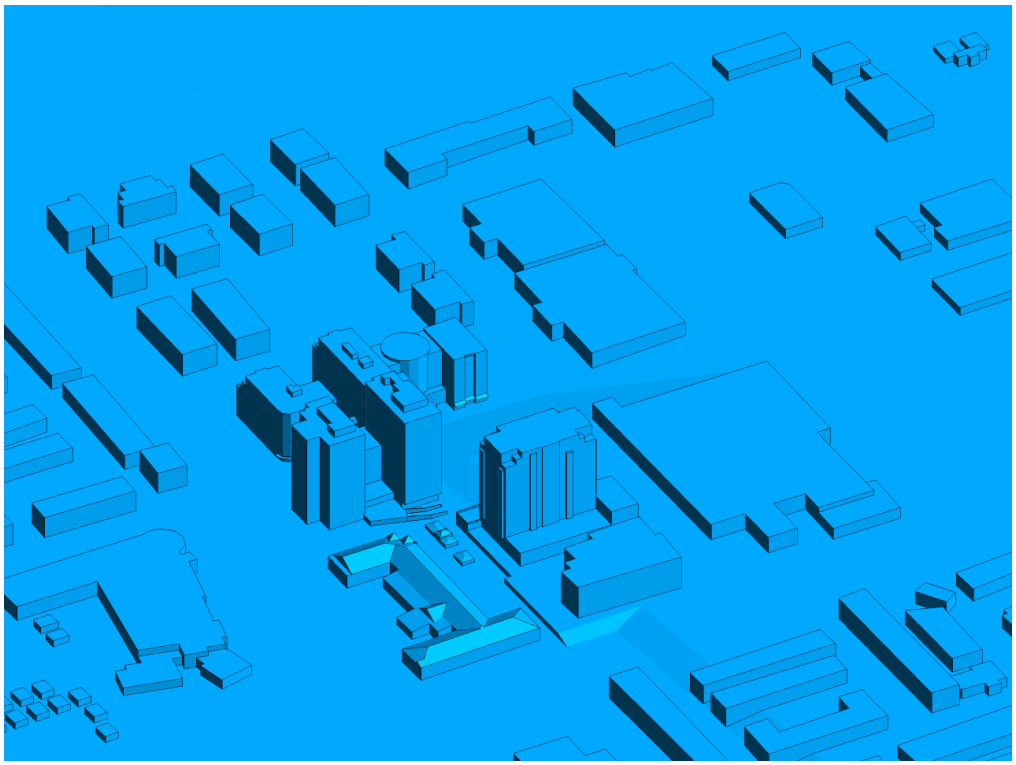


FIGURE 2C: COMPUTATIONAL MODEL, EXISTING MASSING, NORTH PERSPECTIVE

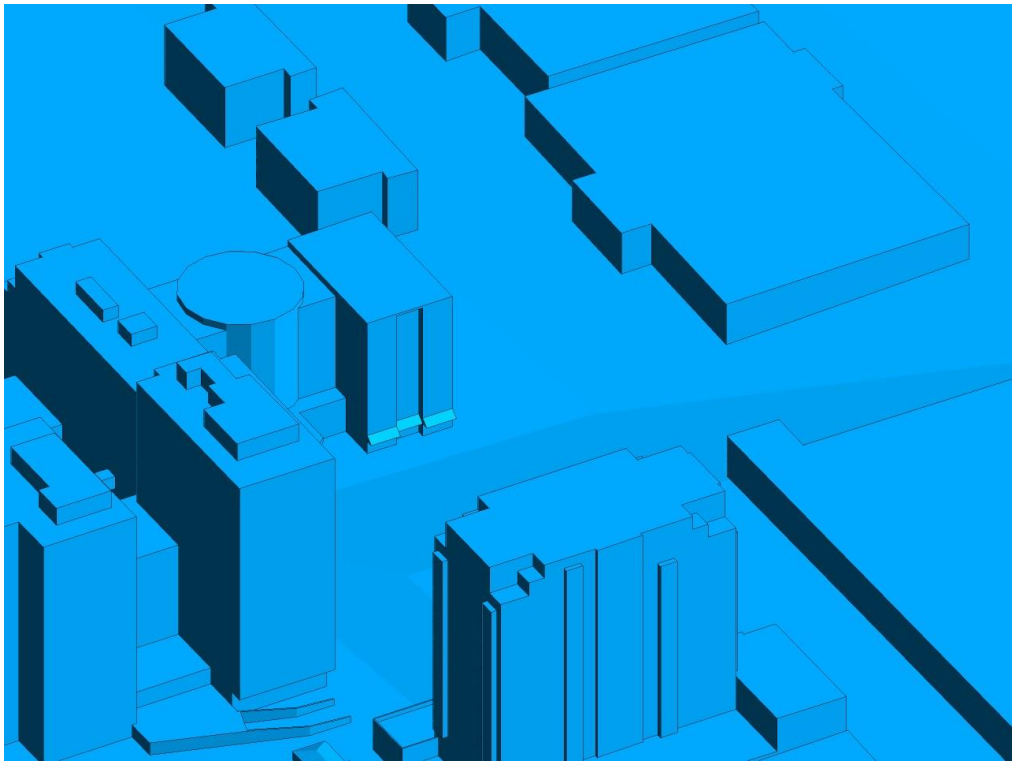


FIGURE 2D: CLOSE UP OF FIGURE 2C

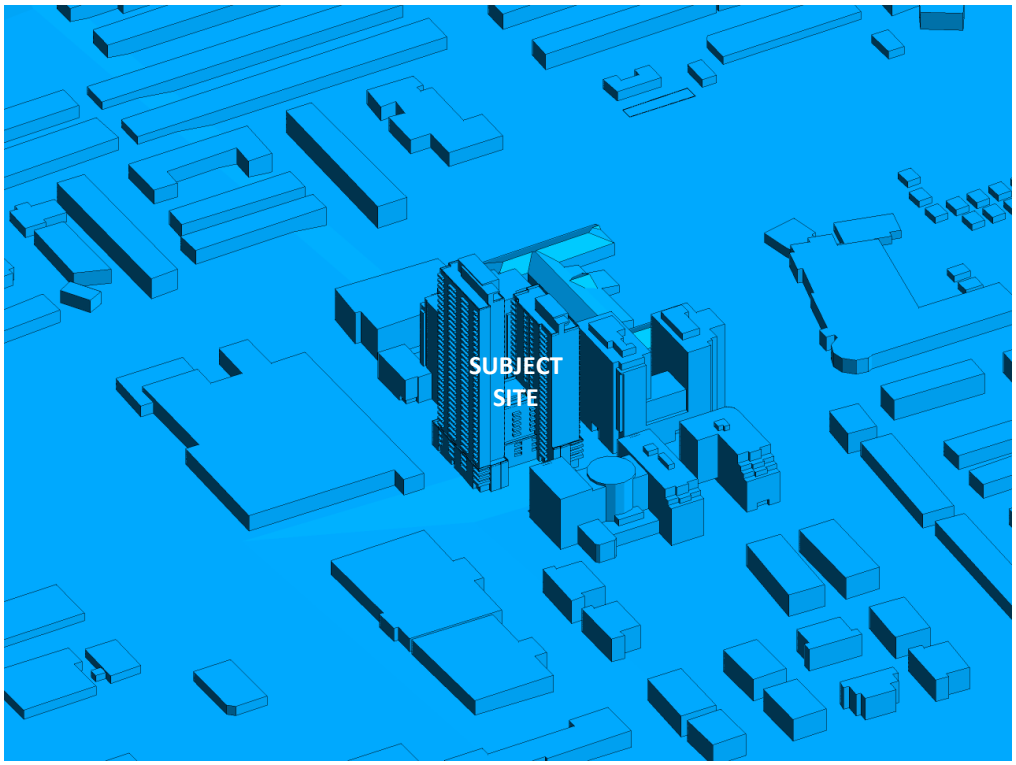


FIGURE 2E: COMPUTATIONAL MODEL, PROPOSED MASSING, SOUTH PERSPECTIVE

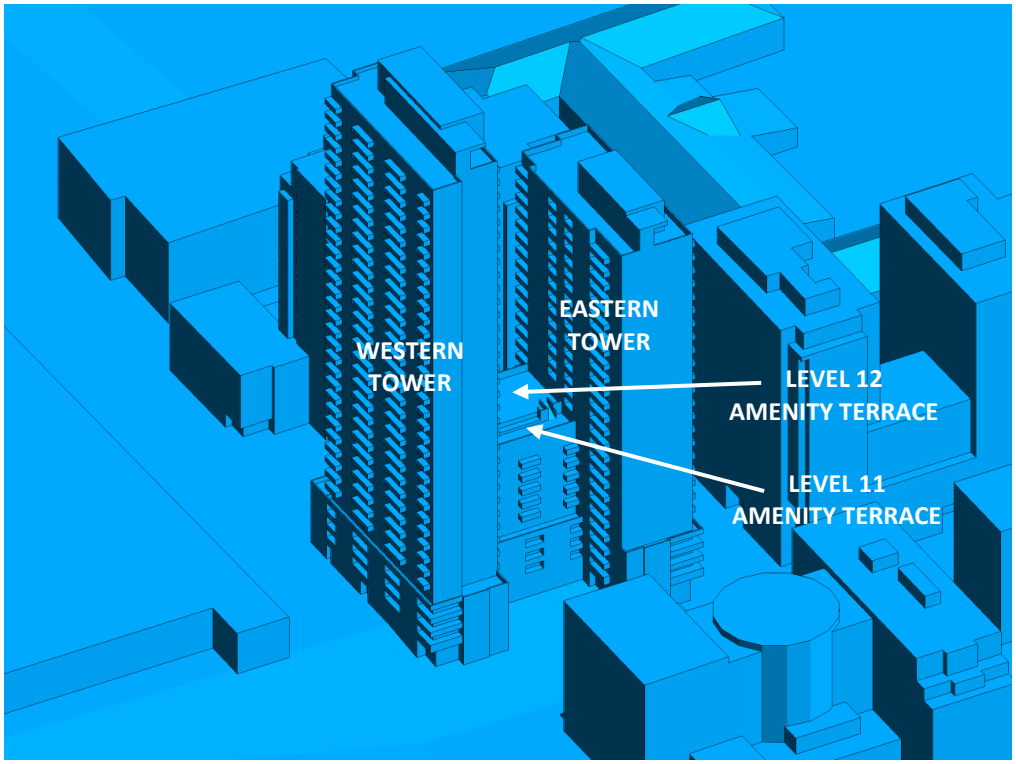


FIGURE 2F: CLOSE UP OF FIGURE 2E

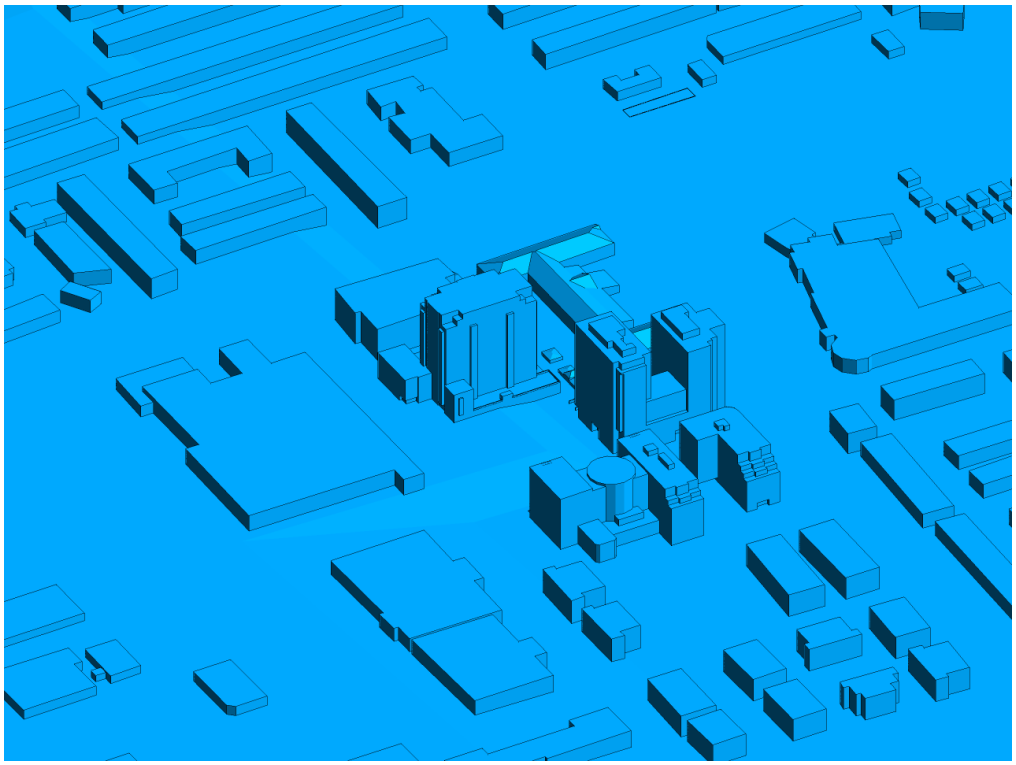


FIGURE 2G: COMPUTATIONAL MODEL, EXISTING MASSING, SOUTH PERSPECTIVE

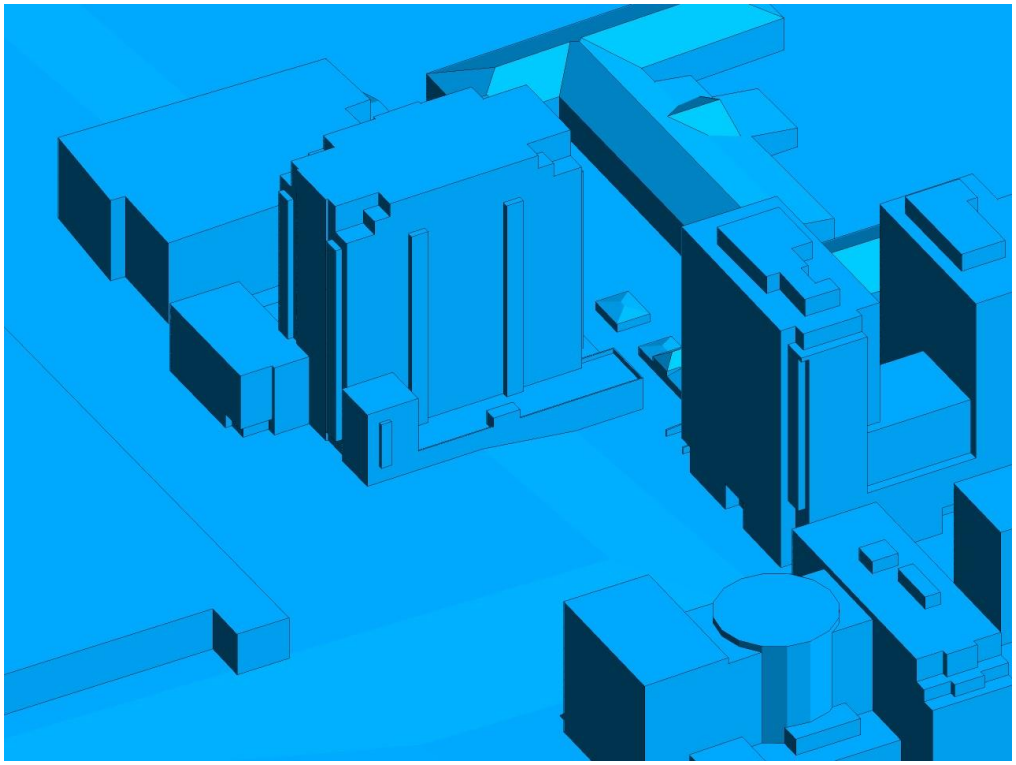


FIGURE 2H: CLOSE UP OF FIGURE 2G

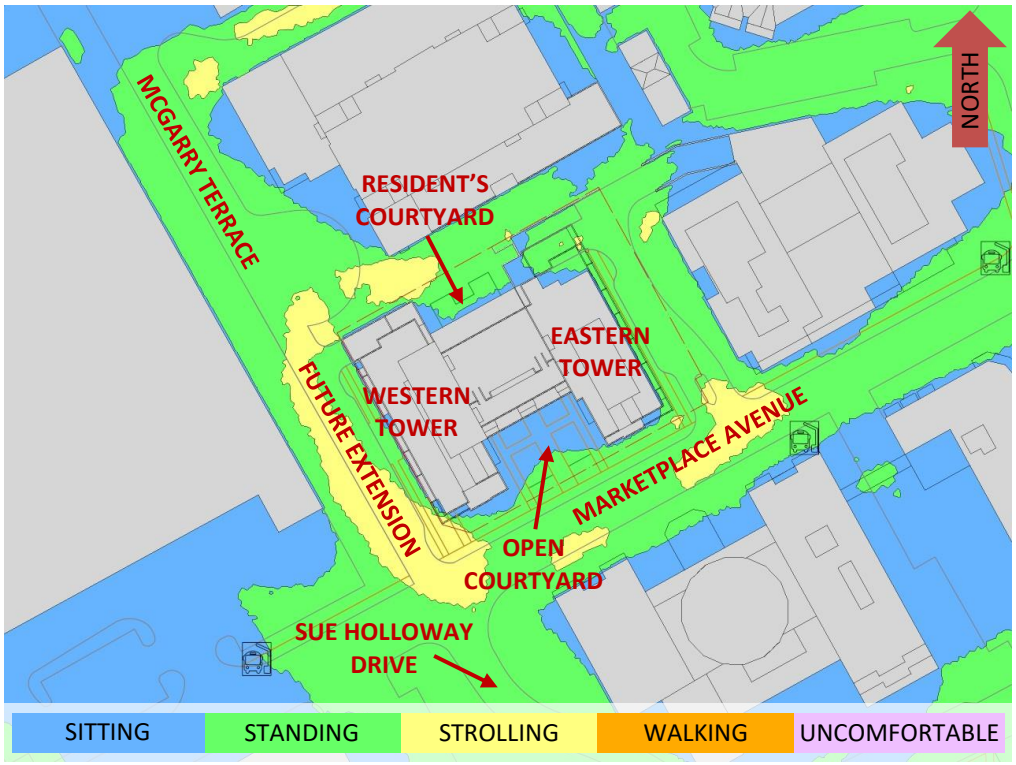


FIGURE 3A: SPRING – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

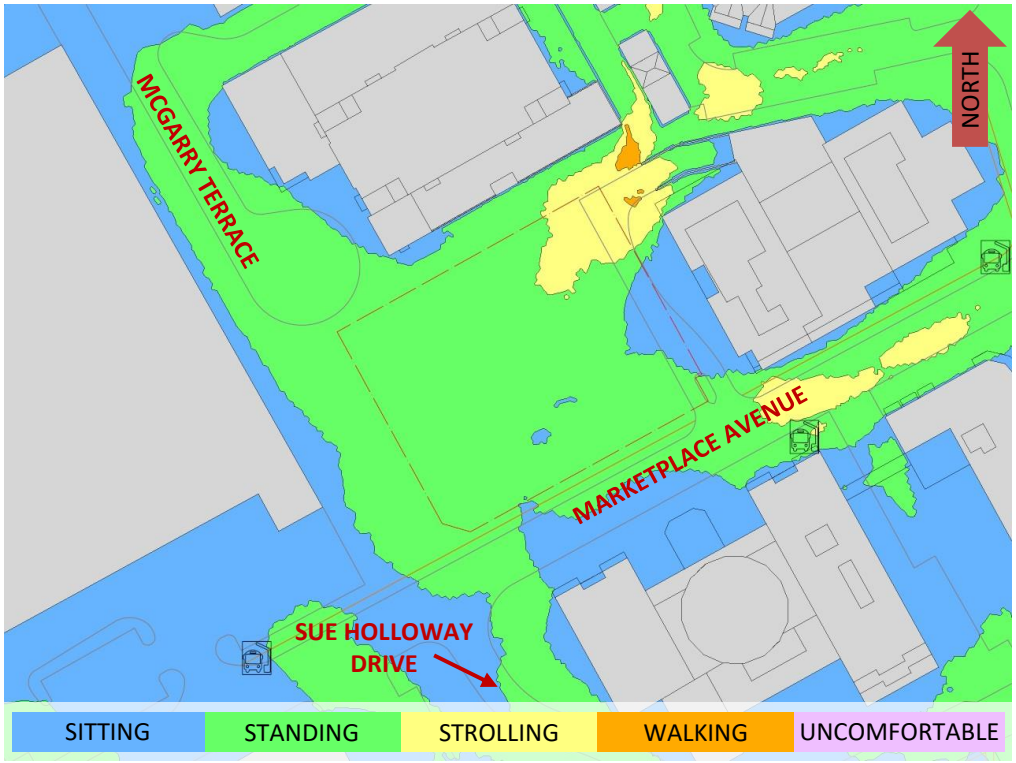


FIGURE 3B: SPRING – WIND COMFORT, GRADE LEVEL – EXISTING MASSING

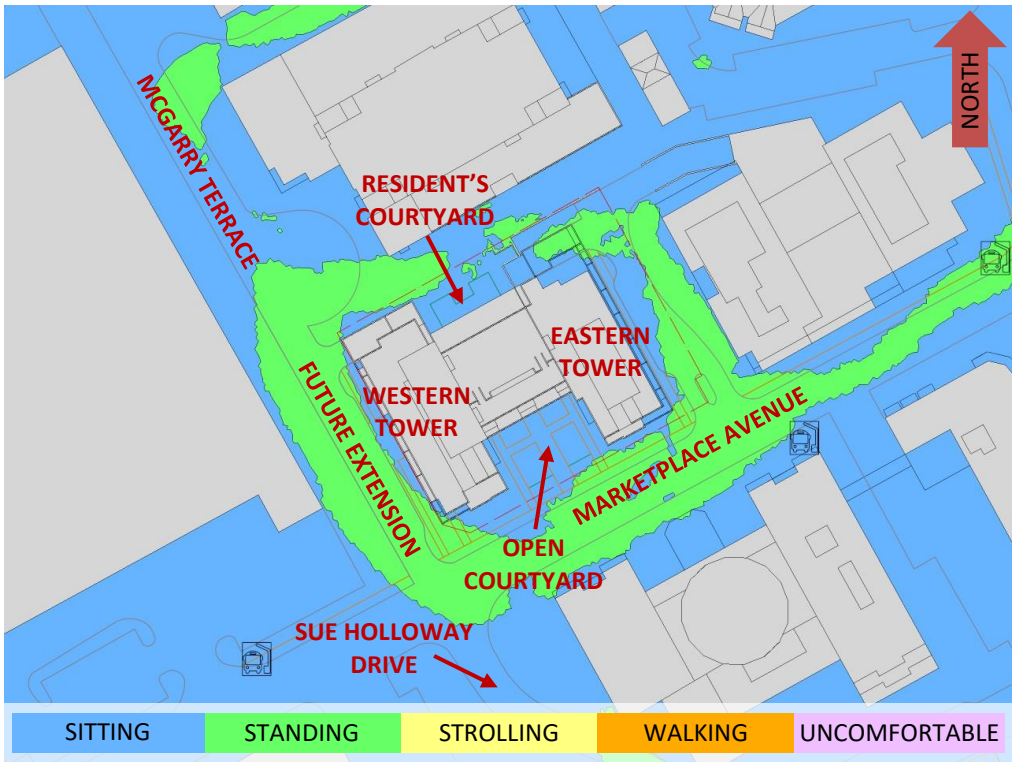


FIGURE 4A: SUMMER – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

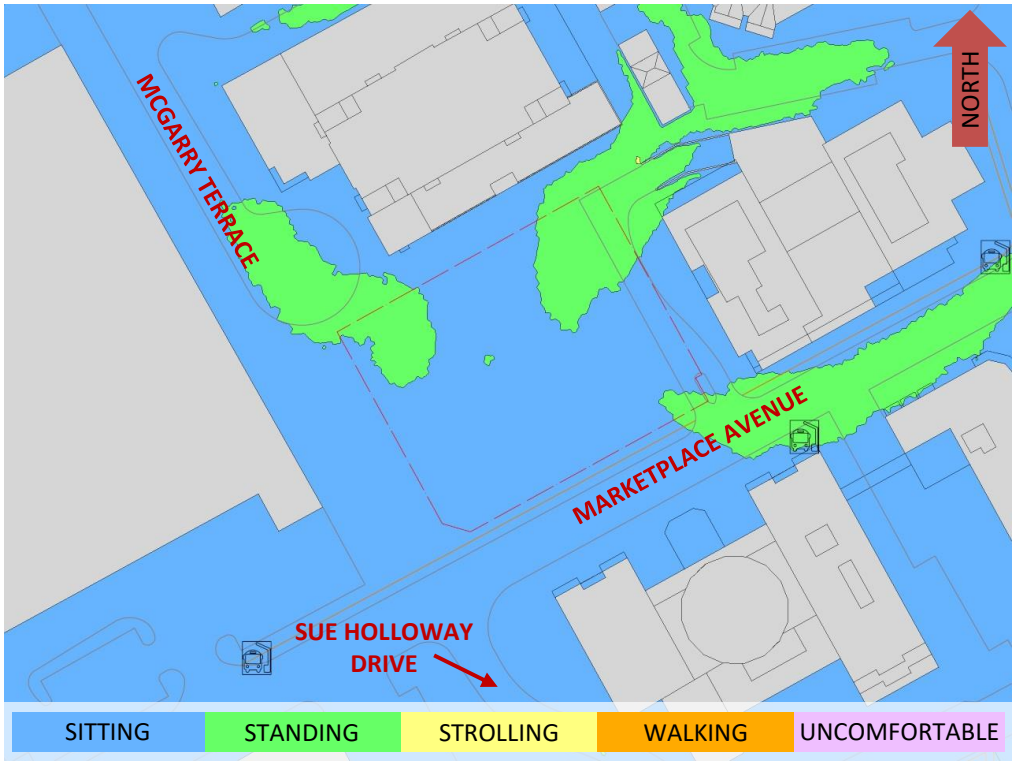


FIGURE 4B: SUMMER – WIND COMFORT, GRADE LEVEL – EXISTING MASSING

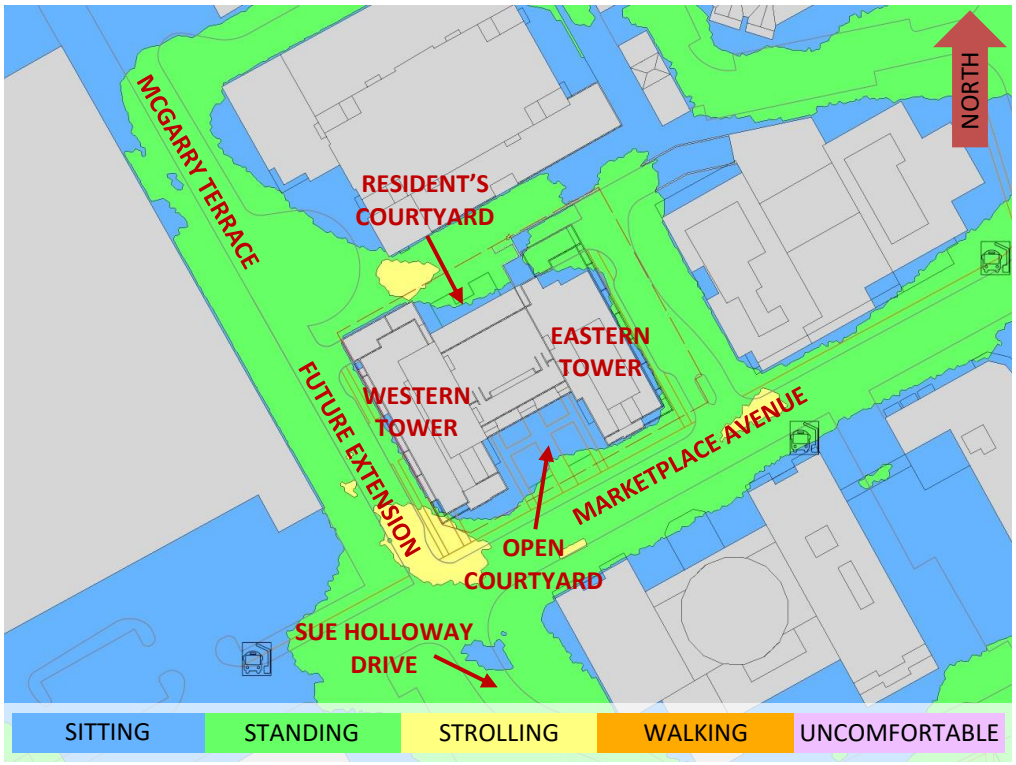


FIGURE 5A: AUTUMN – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

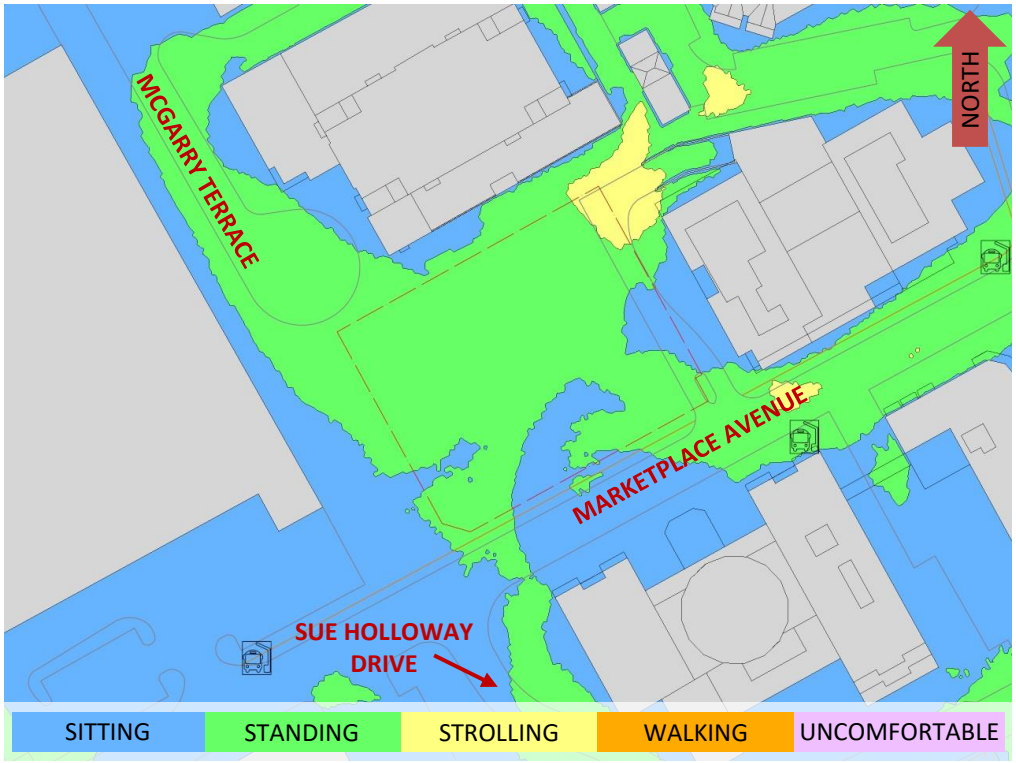


FIGURE 5B: AUTUMN – WIND COMFORT, GRADE LEVEL – EXISTING MASSING

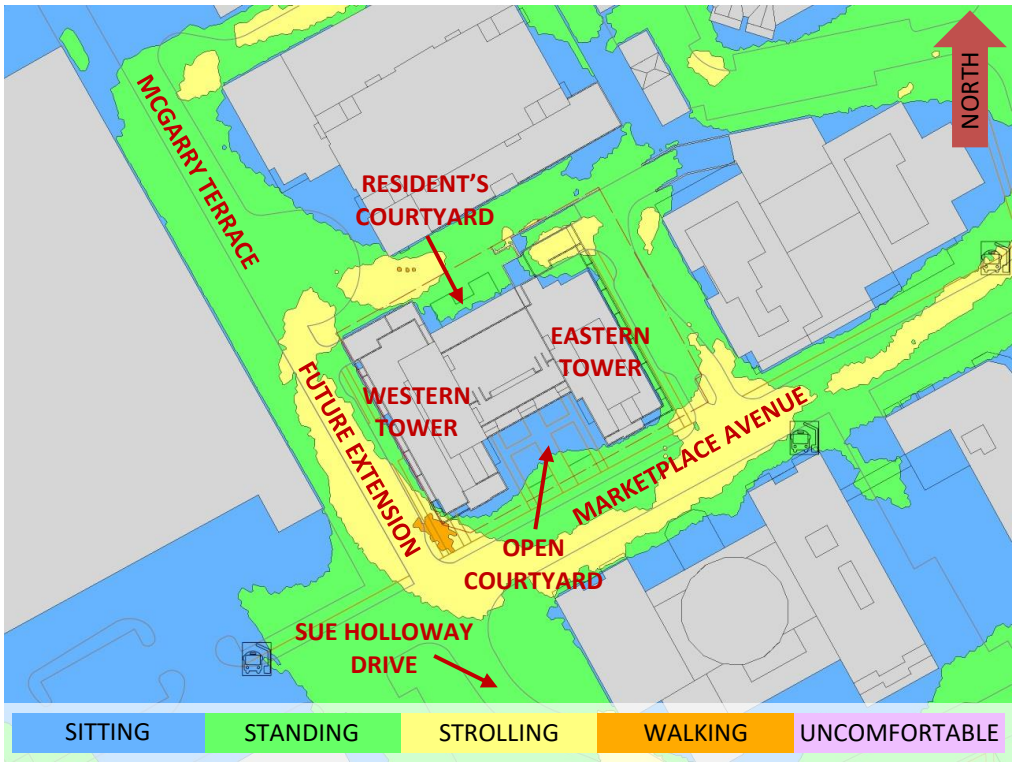


FIGURE 6A: WINTER – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

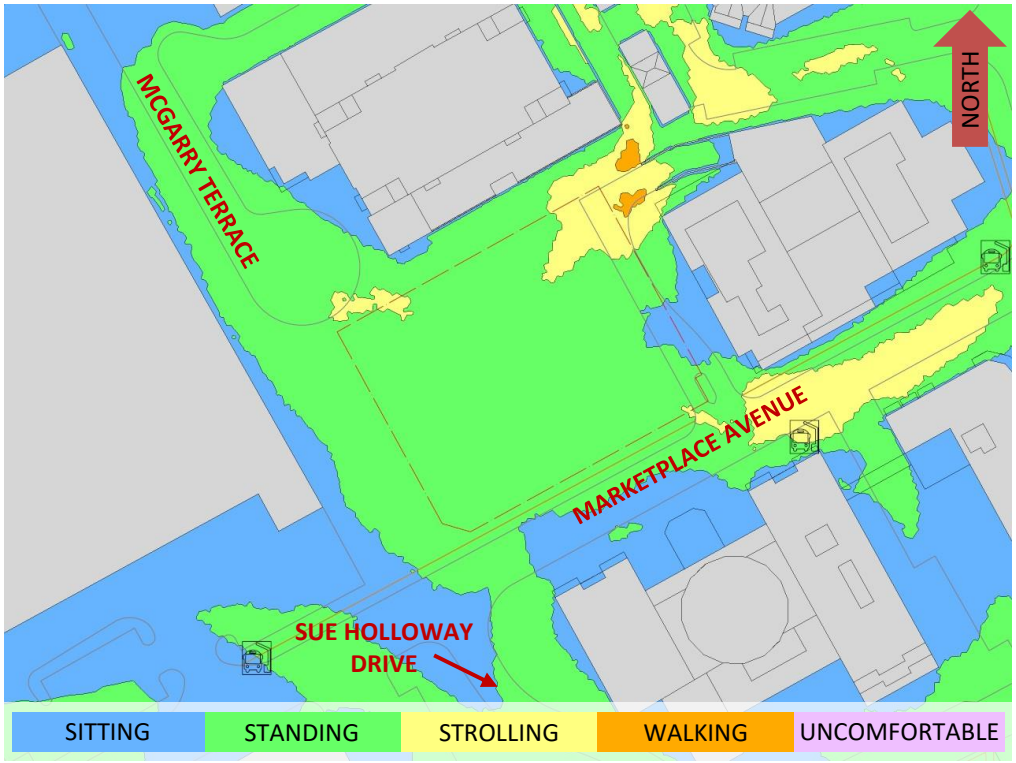


FIGURE 6B: WINTER – WIND COMFORT, GRADE LEVEL – EXISTING MASSING

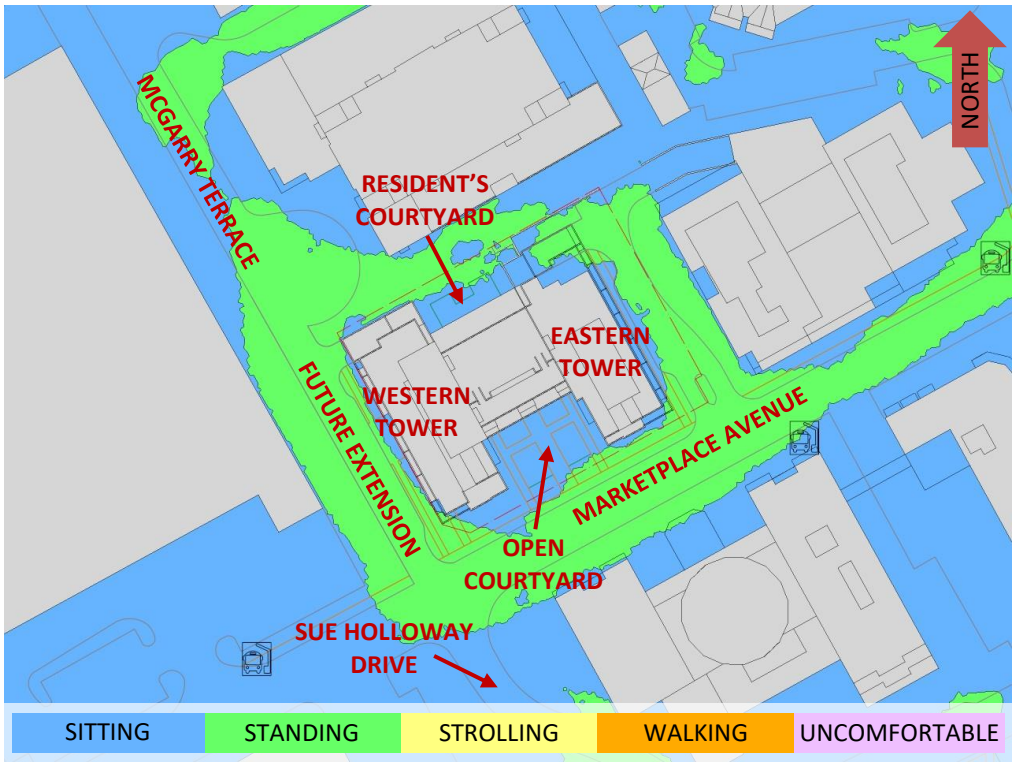


FIGURE 7: TYPICAL USE PERIOD – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

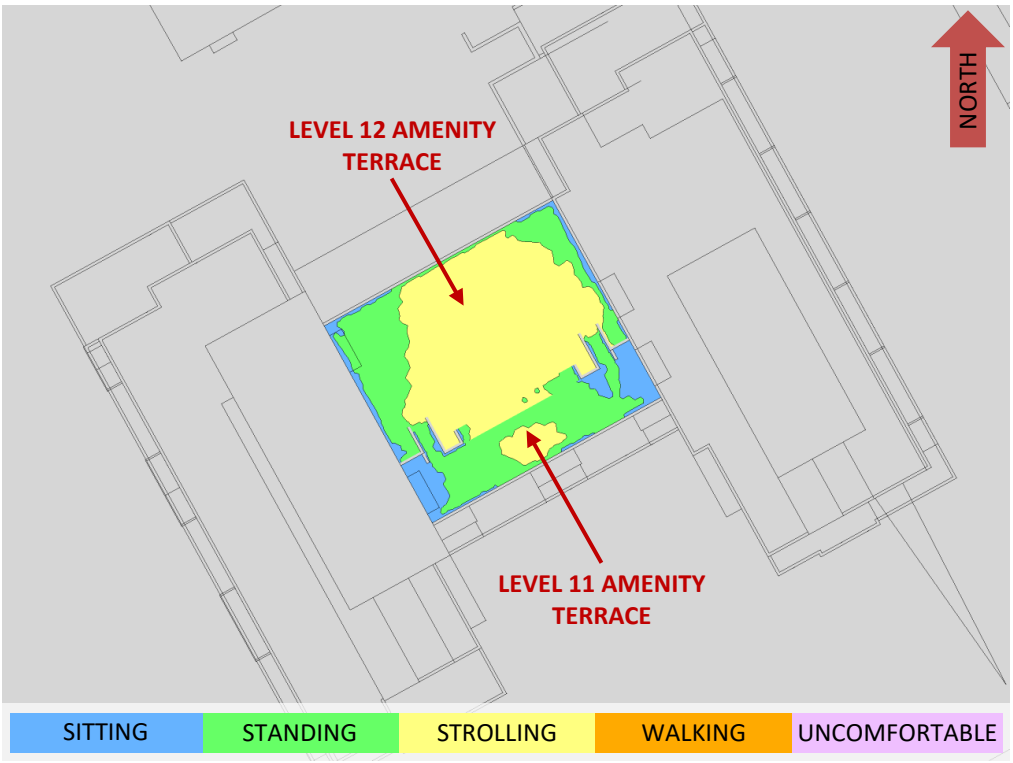


FIGURE 8A: SPRING – WIND COMFORT, COMMON AMENITY TERRACES

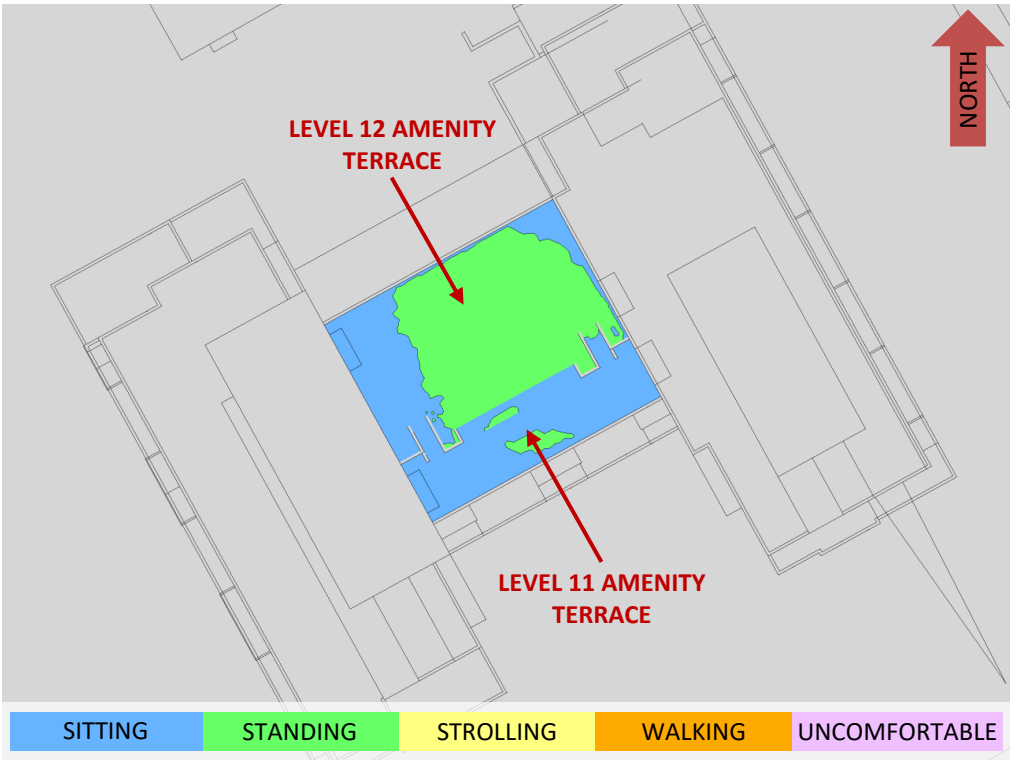


FIGURE 8B: SUMMER – WIND COMFORT, COMMON AMENITY TERRACES

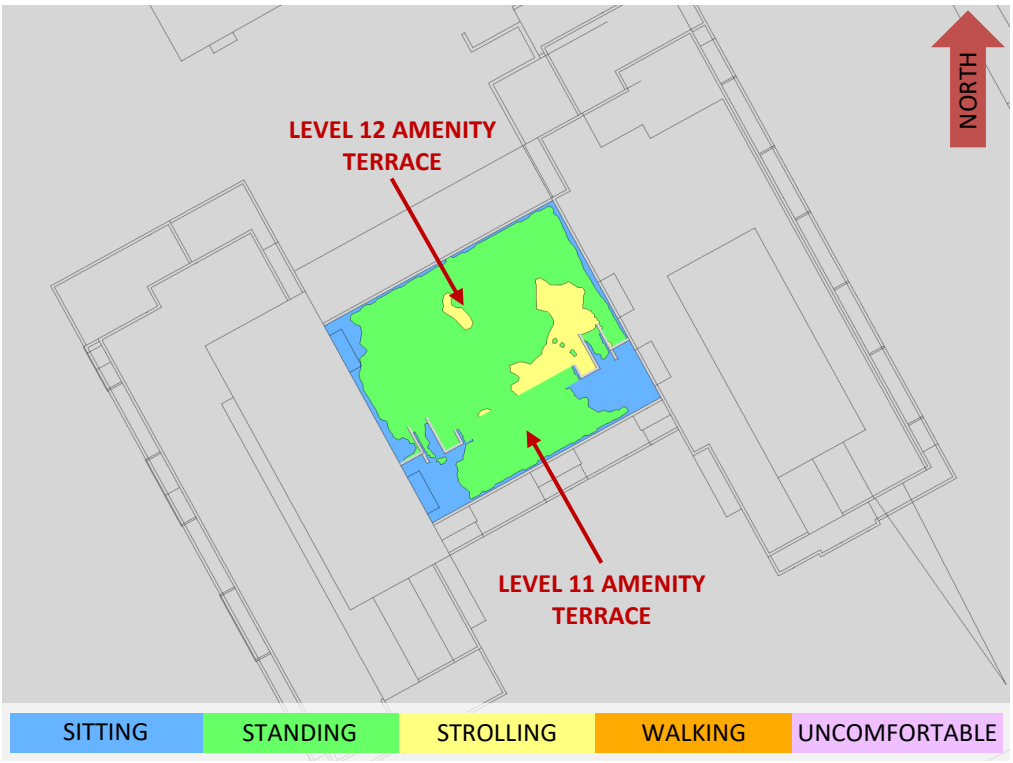


FIGURE 8C: AUTUMN – WIND COMFORT, COMMON AMENITY TERRACES

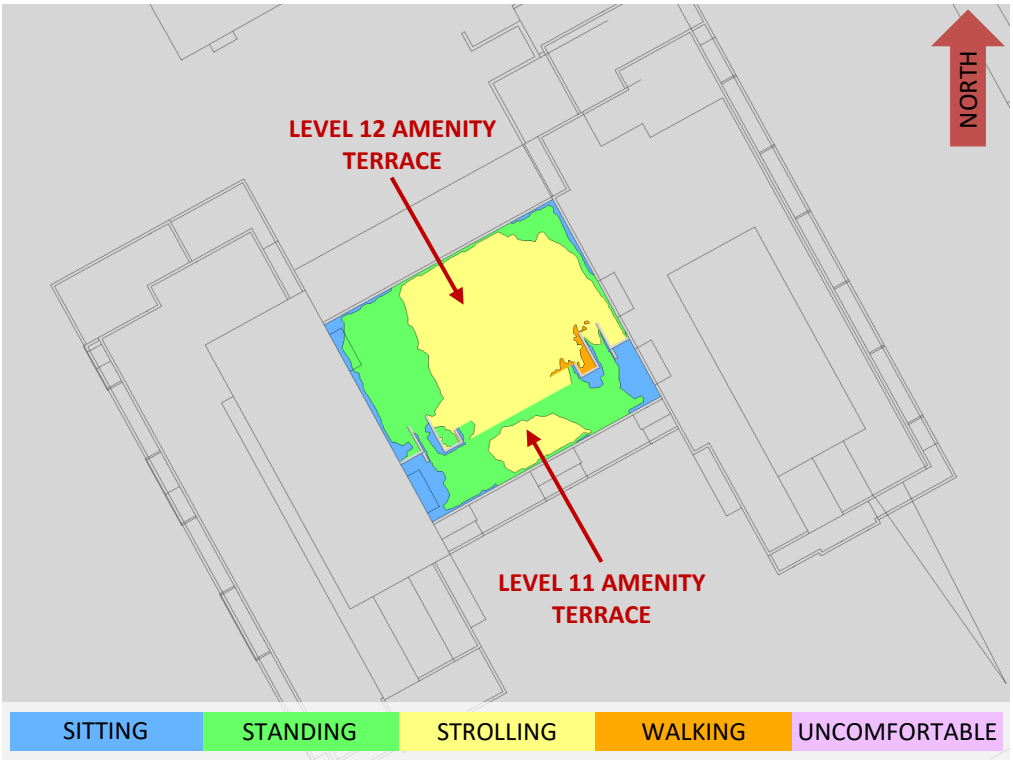


FIGURE 8D: WINTER – WIND COMFORT, COMMON AMENITY TERRACES

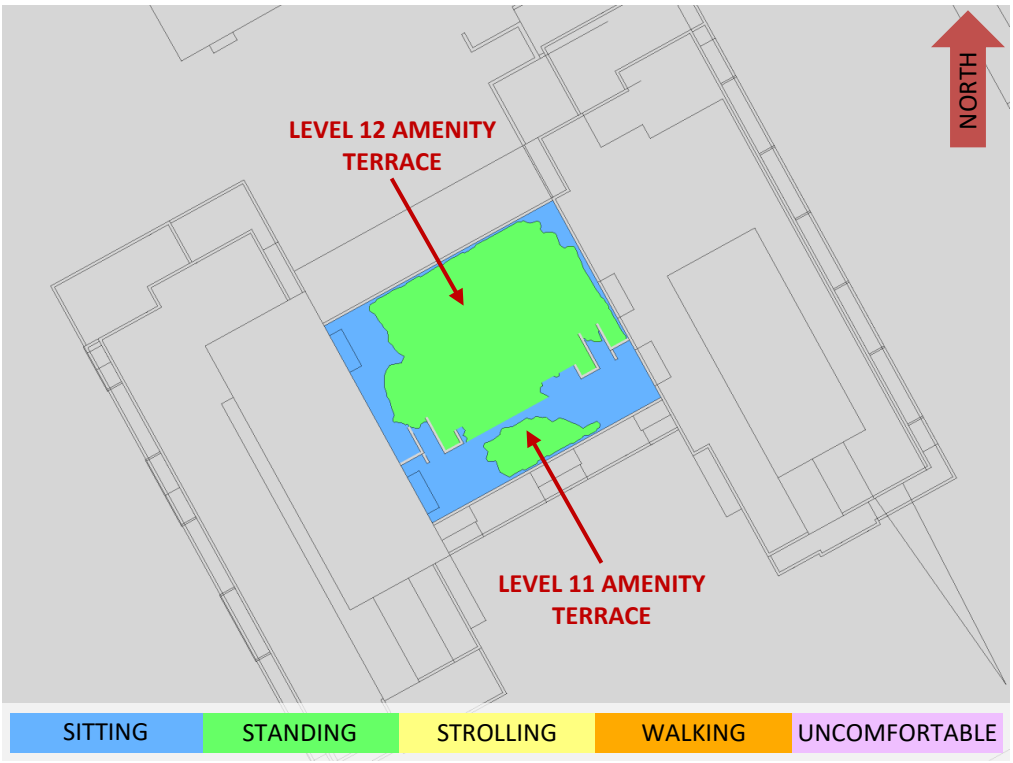
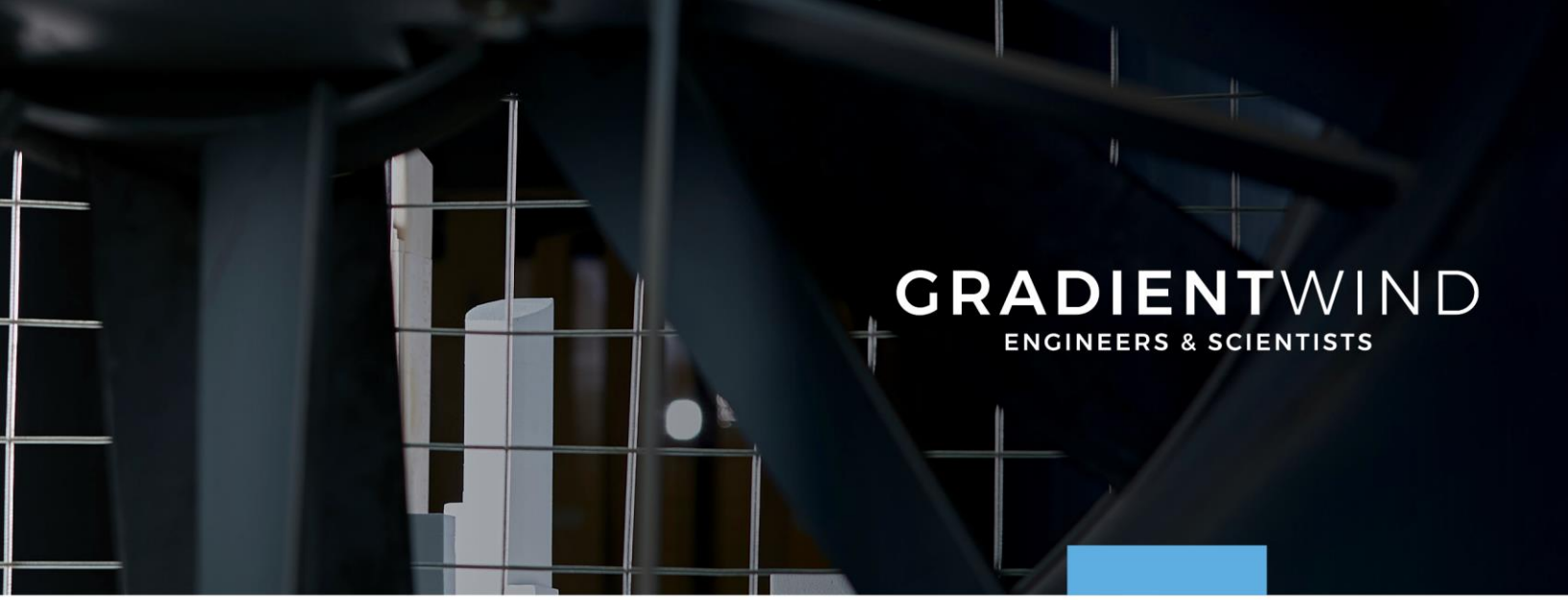
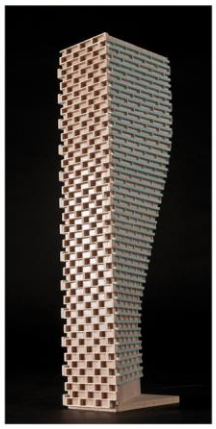
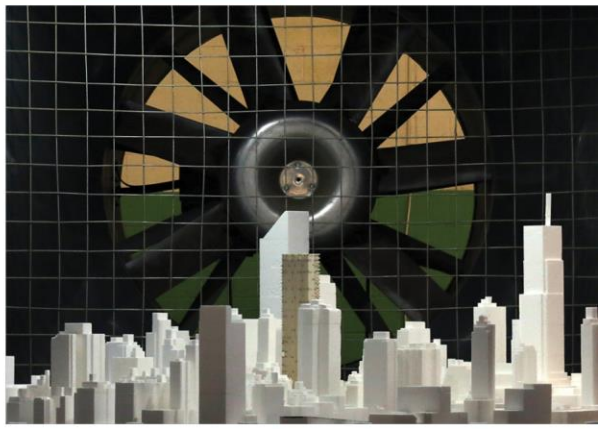


FIGURE 9: TYPICAL USE PERIOD – WIND COMFORT, COMMON AMENITY TERRACES







APPENDIX A

SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

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SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

The atmospheric boundary layer (ABL) is defined by the velocity and turbulence profiles according to industry standard practices. The mean wind profile can be represented, to a good approximation, by a power law relation, Equation (1), giving height above ground versus wind speed (1), (2).

$$U = U_g \left(\frac{Z}{Z_g}\right)^{\alpha} \qquad \text{Equation (1)}$$

where, $\boldsymbol{U}$ = mean wind speed, $\boldsymbol{U_g}$ = gradient wind speed, $\boldsymbol{Z}$ = height above ground, $\boldsymbol{Z_g}$ = depth of the boundary layer (gradient height), and α is the power law exponent.

For the model, U_g is set to 6.5 metres per second, which approximately corresponds to the 60% mean wind speed for Ottawa based on historical climate data and statistical analyses. When the results are normalized by this velocity, they are relatively insensitive to the selection of gradient wind speed.

Z_g is set to 540 m. The selection of gradient height is relatively unimportant, so long as it exceeds the building heights surrounding the subject site. The value has been selected to correspond to our physical wind tunnel reference value.

α is determined based on the upstream exposure of the far-field surroundings (that is, the area that it not captured within the simulation model).

Table 1 presents the values of α used in this study, while Table 2 presents several reference values of α. When the upstream exposure of the far-field surroundings is a mixture of multiple types of terrain, the α values are a weighted average with terrain that is closer to the subject site given greater weight.

TABLE 1: UPSTREAM EXPOSURE (ALPHA VALUE) VS TRUE WIND DIRECTION

Wind Direction (Degrees True)	Alpha Value (α)
0	0.22
49	0.23
74	0.24
103	0.25
167	0.22
197	0.21
217	0.20
237	0.22
262	0.23
282	0.24
301	0.23
324	0.21

TABLE 2: DEFINITION OF UPSTREAM EXPOSURE (ALPHA VALUE)

Upstream Exposure Type	Alpha Value (α)
Open Water	0.14-0.15
Open Field	0.16-0.19
Light Suburban	0.21-0.24
Heavy Suburban	0.24-0.27
Light Urban	0.28-0.30
Heavy Urban	0.31-0.33

The turbulence model in the computational fluid dynamics (CFD) simulations is a two-equation shear-stress transport (SST) model, and thus the ABL turbulence profile requires that two parameters be defined at the inlet of the domain. The turbulence profile is defined following the recommendations of the Architectural Institute of Japan for flat terrain (3).

$$I(Z) = \begin{cases} 0.1\left(\frac{Z}{Z_g}\right)^{-\alpha-0.05}, & Z > 10\ \text{m} \\ 0.1\left(\frac{10}{Z_g}\right)^{-\alpha-0.05}, & Z \leq 10\ \text{m} \end{cases} \qquad \text{Equation (2)}$$

$$L_t(Z) = \begin{cases} 100\ \text{m}\sqrt{\frac{Z}{30}}, & Z > 30\ \text{m} \\ 100\ \text{m}, & Z \leq 30\ \text{m} \end{cases} \qquad \text{Equation (3)}$$

where, I = turbulence intensity, L_t = turbulence length scale, Z = height above ground, and α is the power law exponent used for the velocity profile in Equation (1).

Boundary conditions on all other domain boundaries are defined as follows: the ground is a no-slip surface; the side walls of the domain have a symmetry boundary condition; the top of the domain has a specified shear, which maintains a constant wind speed at gradient height; and the outlet has a static pressure boundary condition.

REFERENCES

[1] P. Arya, "Chapter 10: Near-neutral Boundary Layers," in *Introduction to Micrometeorology*, San Diego, California, Academic Press, 2001.

[2] S. A. Hsu, E. A. Meindl and D. B. Gilhousen, "Determining the Power-Law Wind Profile Exponent under Near-neutral Stability Conditions at Sea," vol. 33, no. 6, 1994.

[3] Y. Tamura, H. Kawai, Y. Uematsu, K. Kondo and T. Okhuma, "Revision of AIJ Recommendations for Wind Loads on Buildings," in *The International Wind Engineering Symposium, IWES 2003*, Taiwan, 2003.

APPENDIX:

SHADOW ANALYSIS

FALL EQUINOX- SEPT 21ST- 8AM-6PM (EDT)

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
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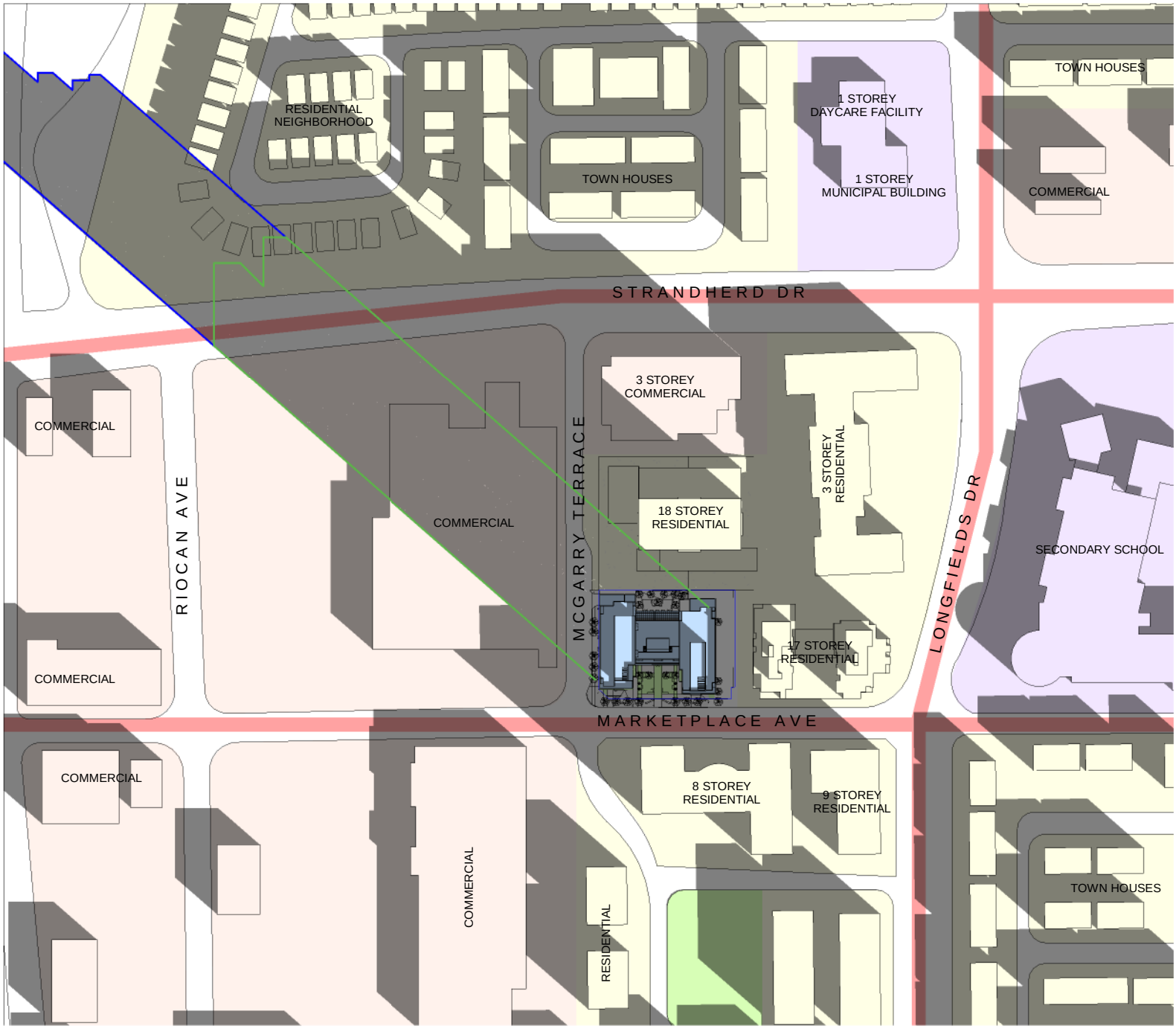


PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW PROJECTS OVER MCGARRY TERRACE IN A NORTHWESTERNLY DIRECTION. THE SHADOW CASCASDES PRIMARILY OVER THE BACK OF THE NEIGHBORING COMMERCIAL DEVELOPMENT AND PARKING LOT. THE SHADOW ALSO CROSSES OVER STRANDHERD AND CASTS OVER PARTS OF THE RESIDENTIAL NEIGHBORHOOD TO THE NORTH. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING TO THE SOUTH IS CAST OVER THE MAJORITY OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

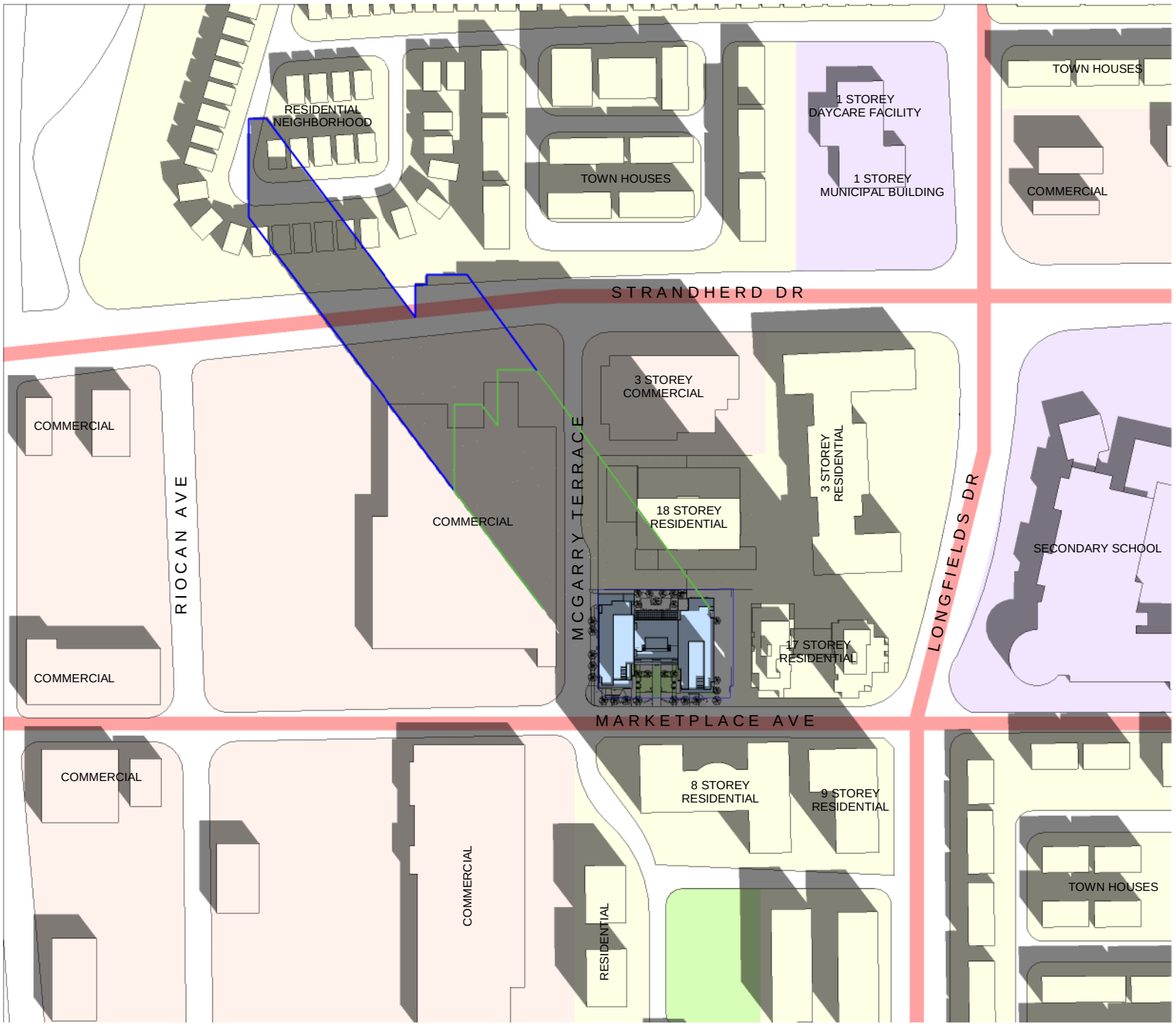
FALL EQUINOX- SEPT 21ST- 8AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW PROJECTS OVER MCGARRY TERRACE IN A NORTHWESTERNLY DIRECTION. THE SHADOW CASCASDES PRIMARILY OVER THE BACK OF THE NEIGHBORING COMMERCIAL DEVELOPMENT AND PARKING LOT. THE SHADOW ALSO CROSSES OVER STRANDHERD AND CASTS OVER PARTS OF THE RESIDENTIAL NEIGHBORHOOD TO THE NORTH. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING TO THE SOUTH IS CAST OVER THE MAJORITY OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

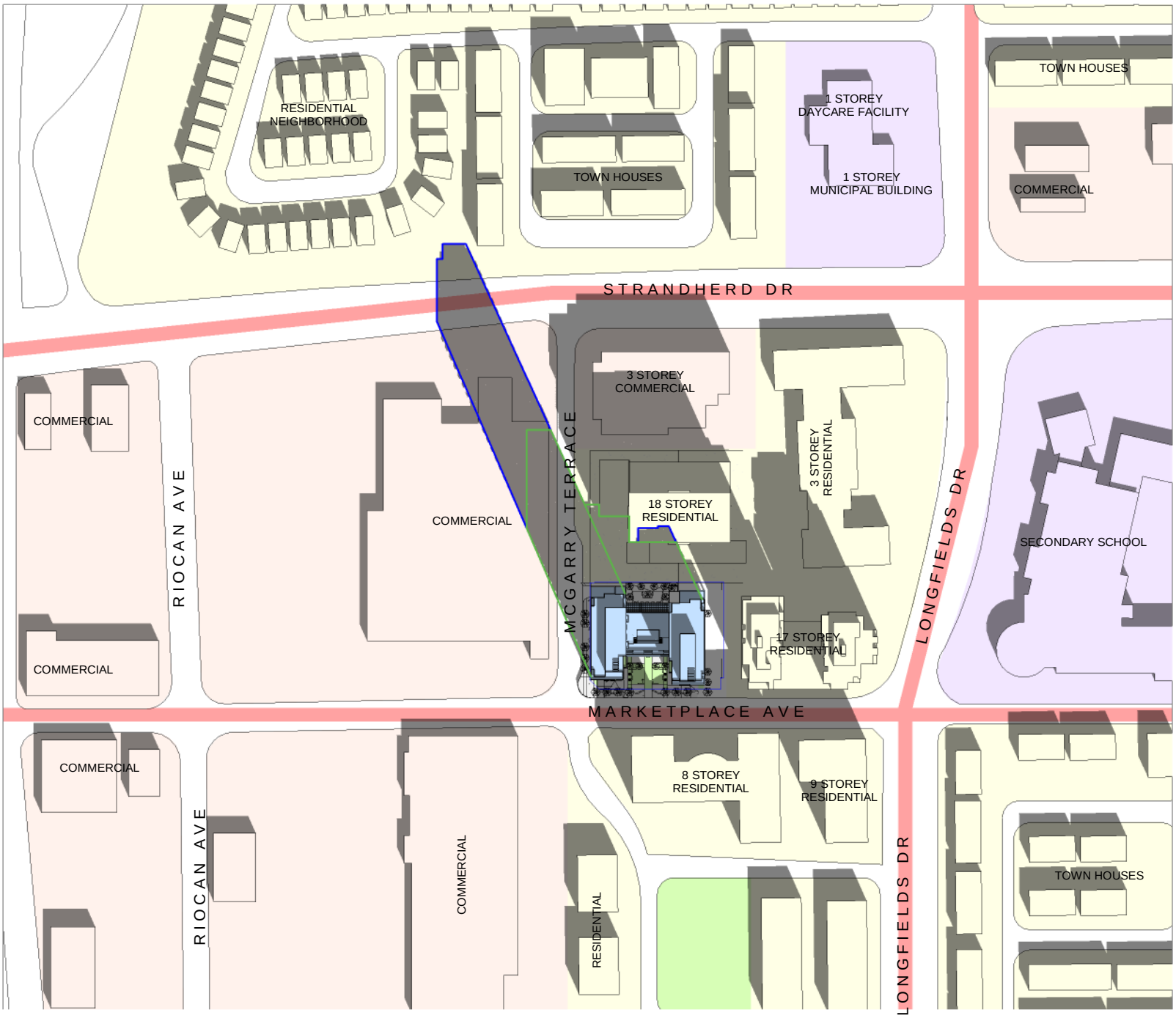
FALL EQUINOX- SEPT 21ST- 9AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW PROJECTS OVER MCGARRY TERRACE IN A NORTHWESTERNLY DIRECTION. THE SHADOW CASCASDES PRIMARILY OVER THE BACK OF THE NEIGHBORING COMMERCIAL DEVELOPMENT AND PARKING LOT. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING TO THE SOUTH IS CAST OVER ABOUT 50% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 10AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
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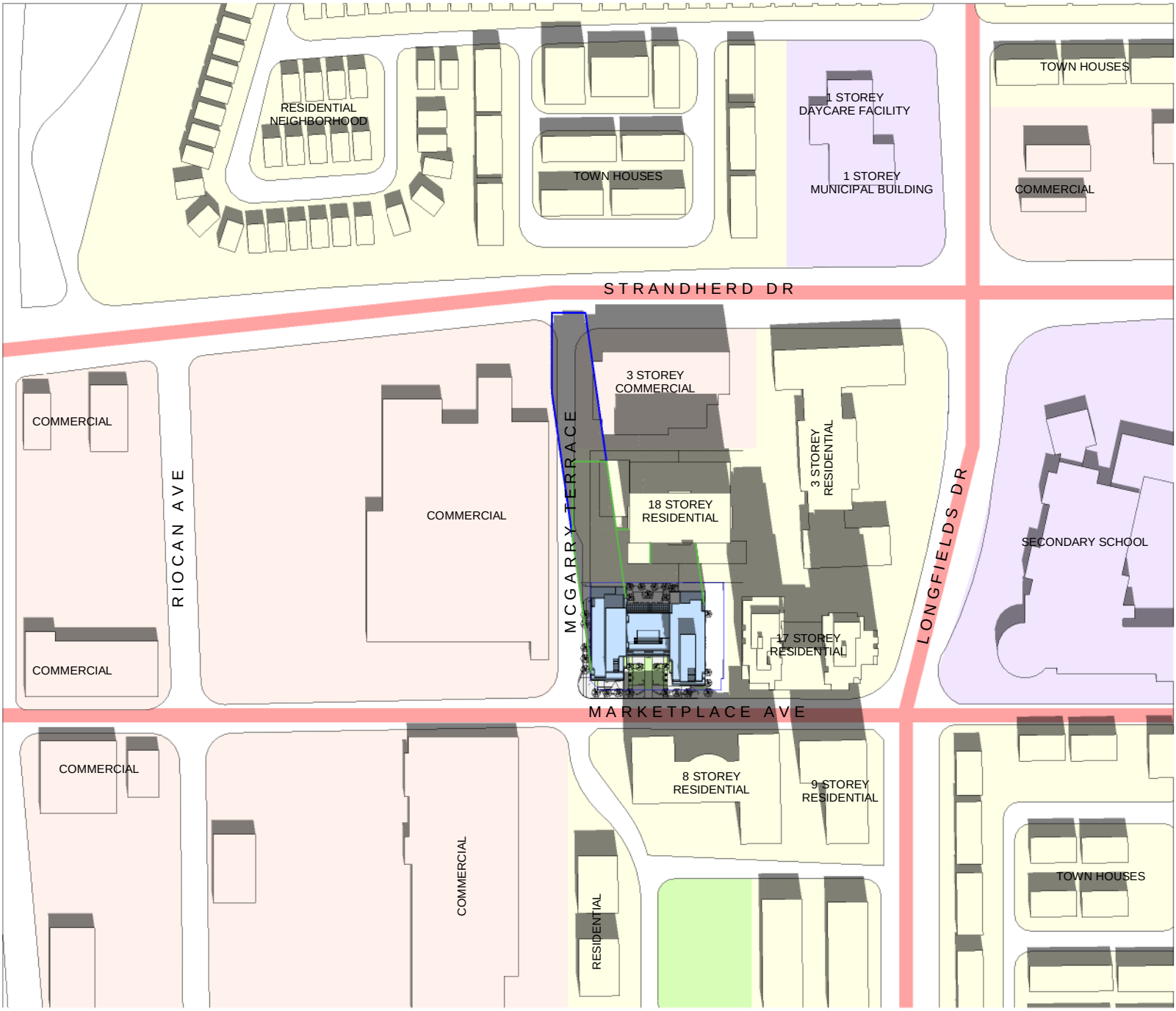

PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS WEST TOWER SHADOW CASCASDES PRIMARILY OVER MCGARRY TERRACE WHILE THE EAST TOWER SHADOW IS CAST TO THE NORTH TOWARDS THE 18 STOREY RESIDENTIAL BUILDING. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING IS CAST OVER ABOUT 50% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 11AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
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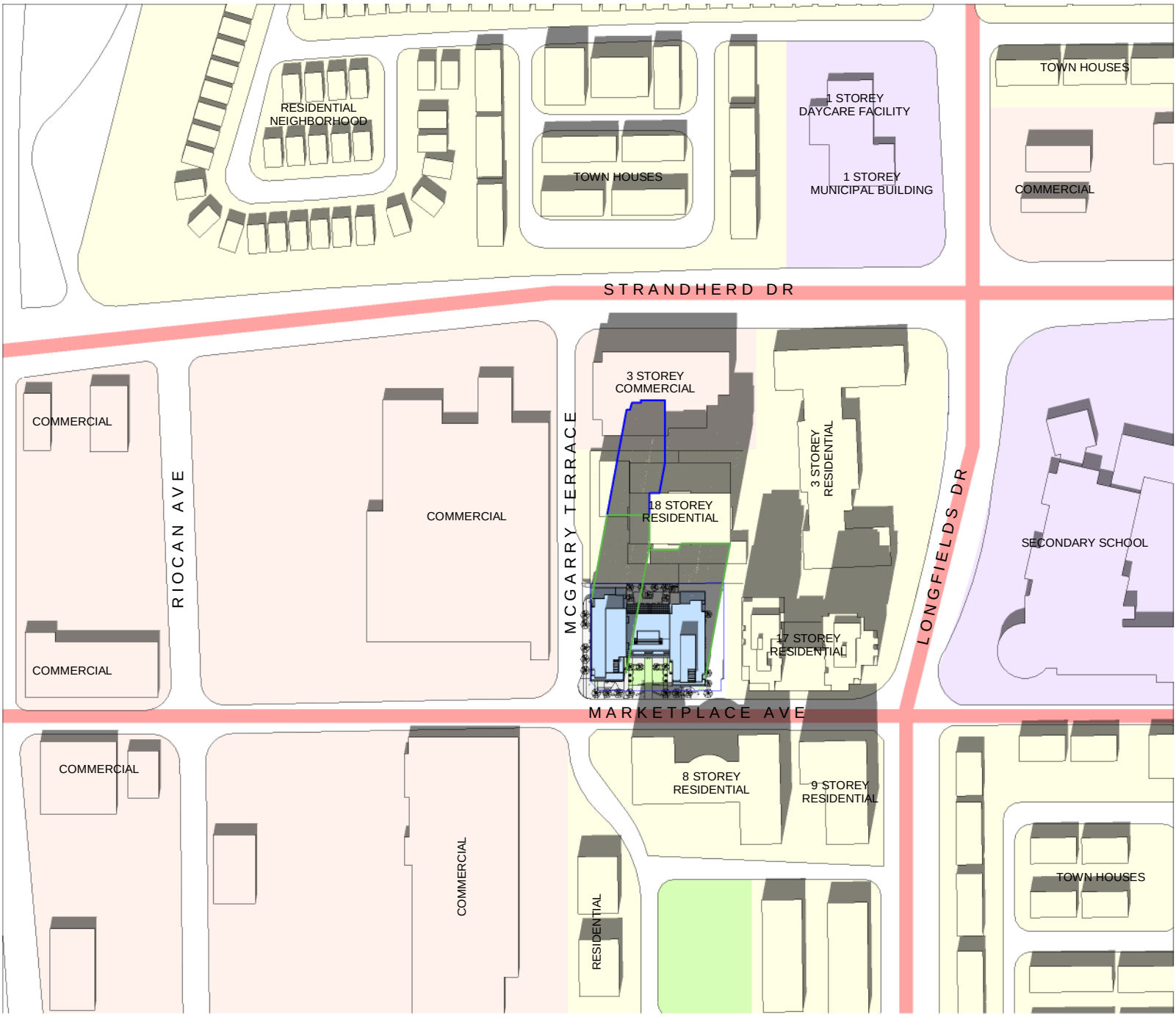

PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW PROJECTS NORTH TO THE ADJACENT 18 & 3 STOREY RESIDENTIAL BUILDINGS. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING IS CAST OVER ABOUT 25% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 12PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
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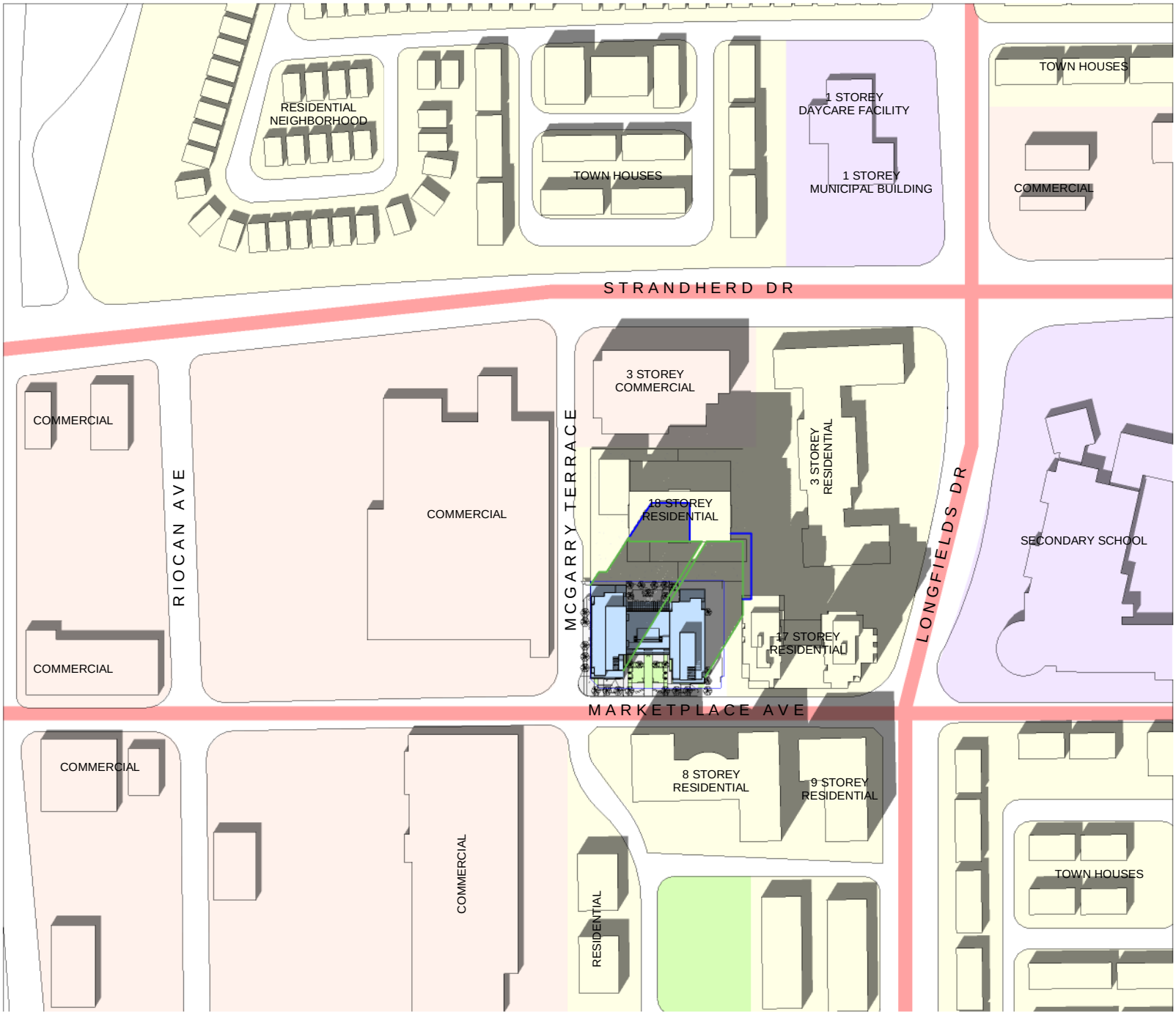
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW PROJECTS NORTH TO THE ADJACENT 18 STOREY RESIDENTIAL BUILDING. THE SHADOW FROM THE 8 STOREY RESIDENTIAL BUILDING IS CAST OVER ABOUT 25% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

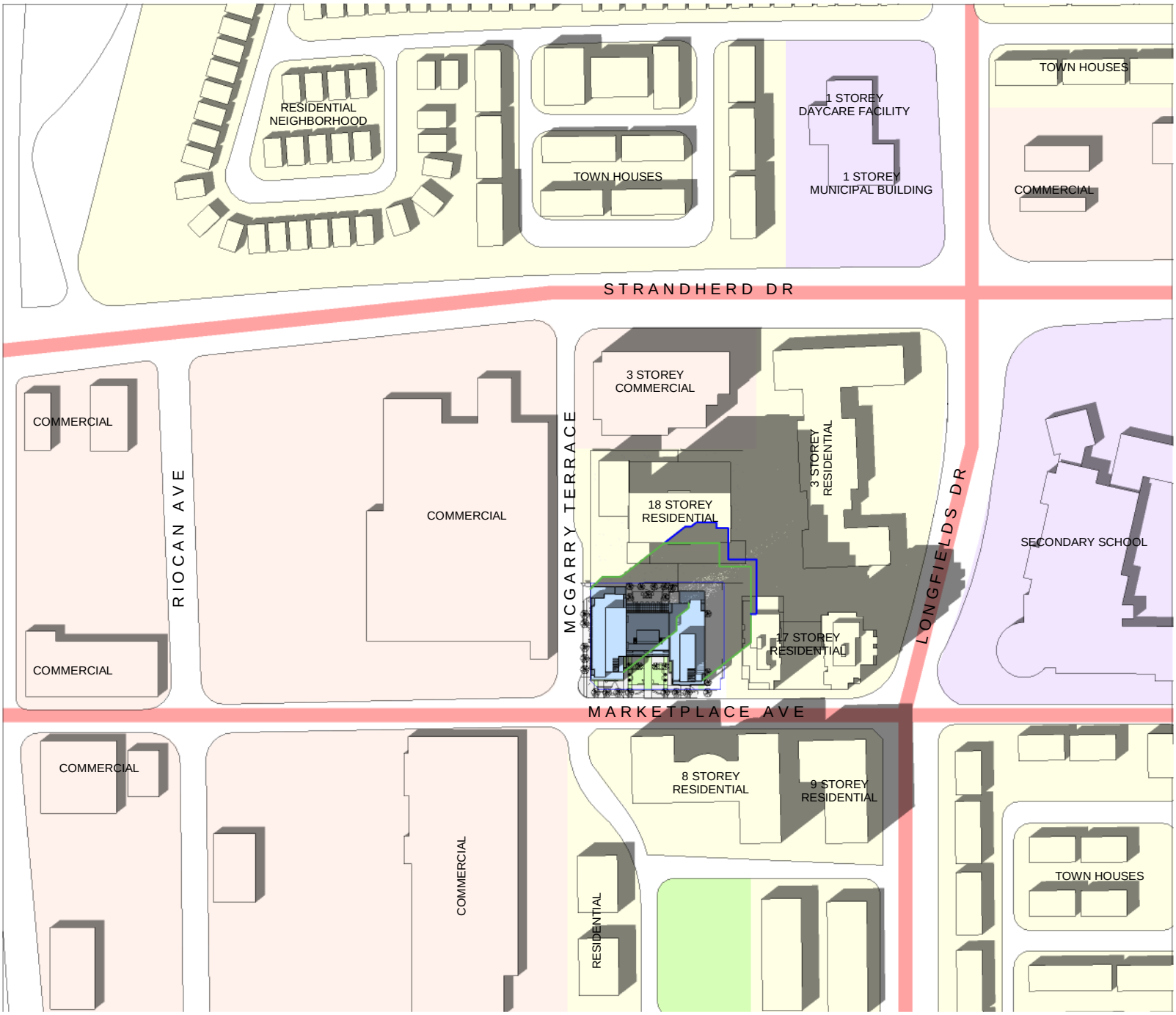
FALL EQUINOX- SEPT 21ST- 1PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS WEST TOWER SHADOW PROJECTS NORTH TO THE ADJACENT 18 STOREY RESIDENTIAL BUILDING. THE WEST TOWER SHADOW IS CAST OVER ABOUT 10% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 2PM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
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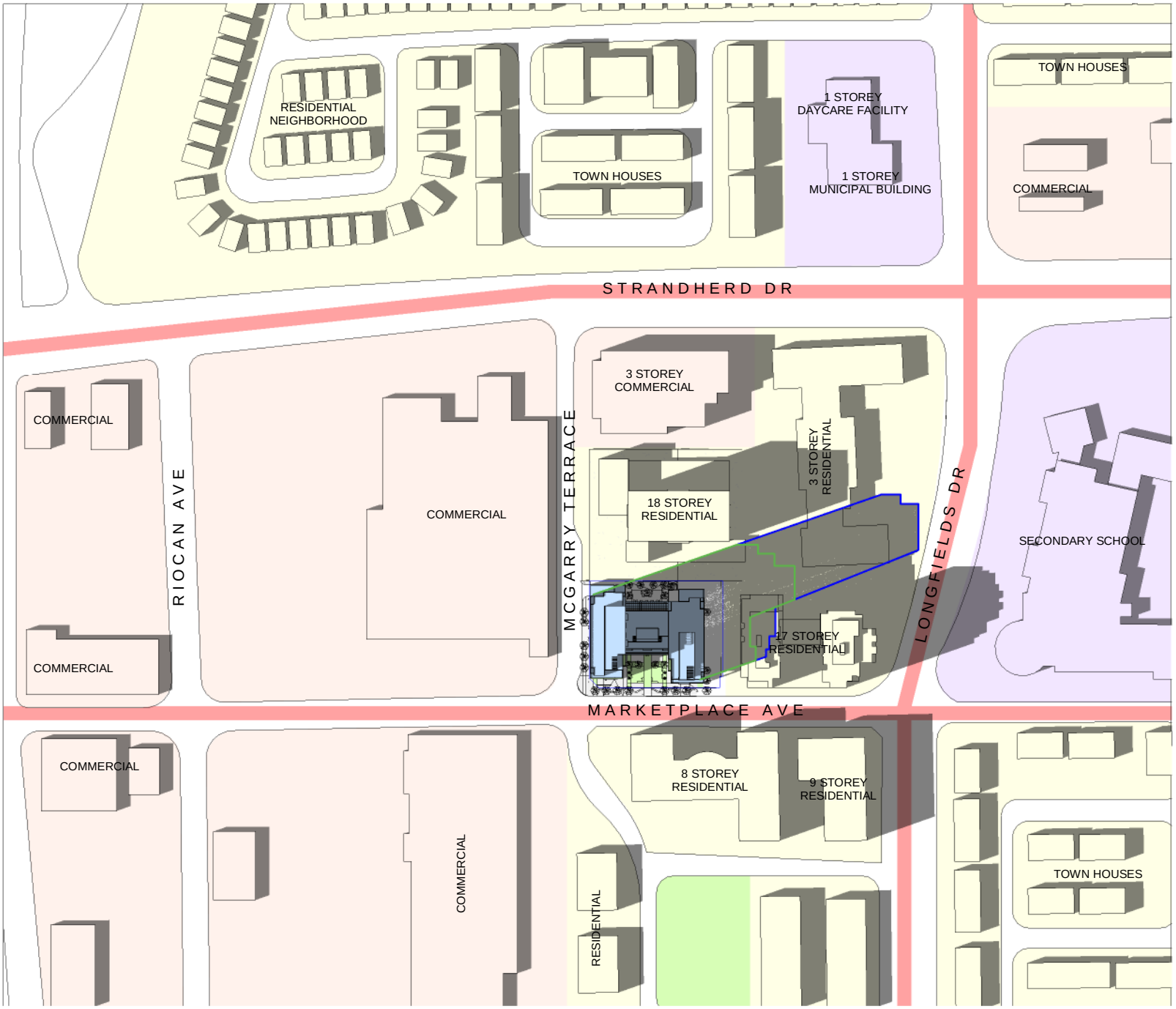
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILING PROJECTS TO THE NORTHEAST TO THE ADJACENT 17 & 3 STOREY RESIDENTIAL BUILDINGS. THE WEST TOWERS SHADOW IS CAST OVER ABOUT 20% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 3PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
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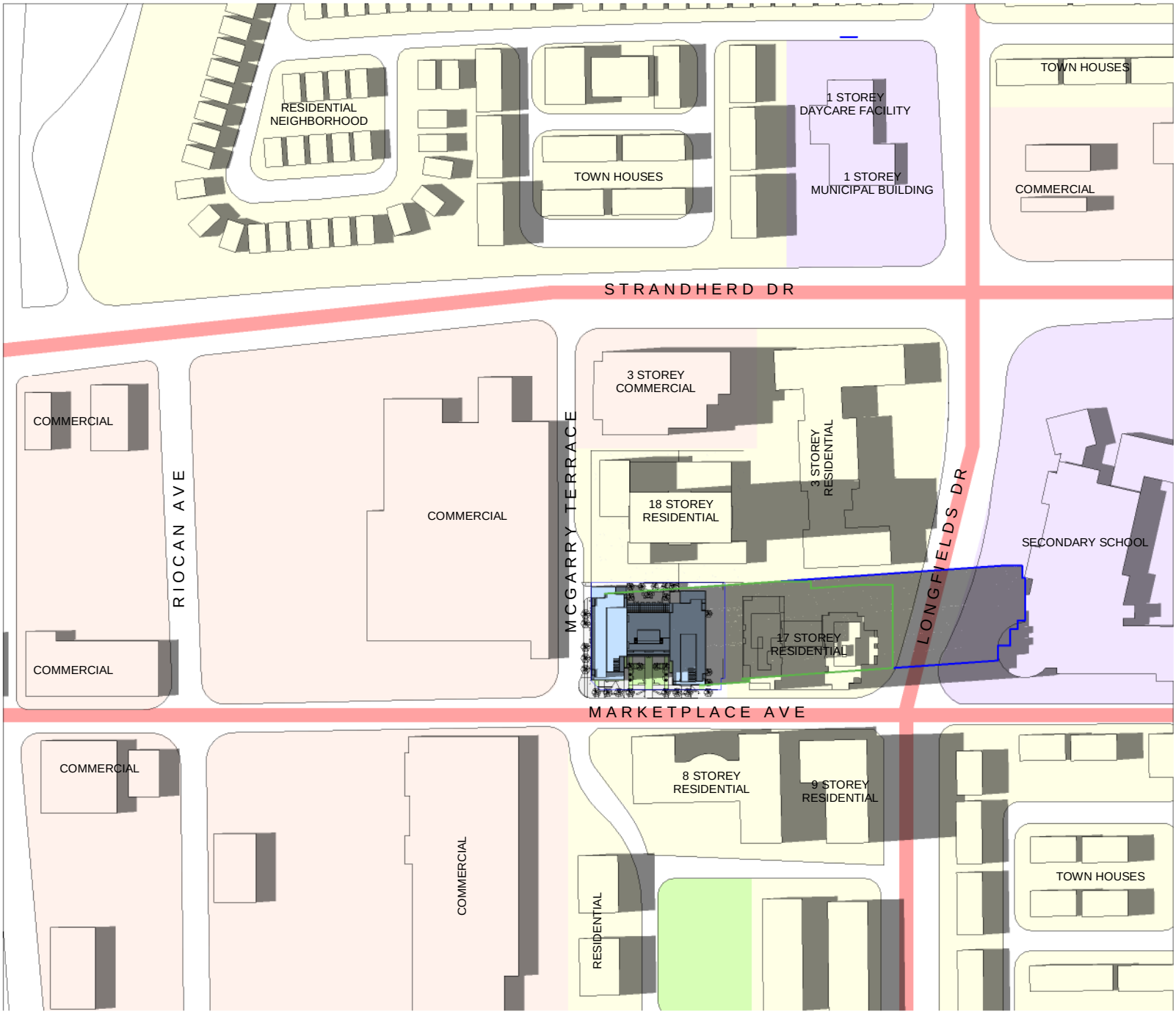
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT EAST PAST THE ADJACENT 17 STOREY BUILDING OVER LONGFIELDS DR. TO THE SECONDARY SCHOOL. THE WEST TOWERS SHADOW IS CAST OVER ABOUT 40% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 4PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
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WINDSOR, ON N8N2M1
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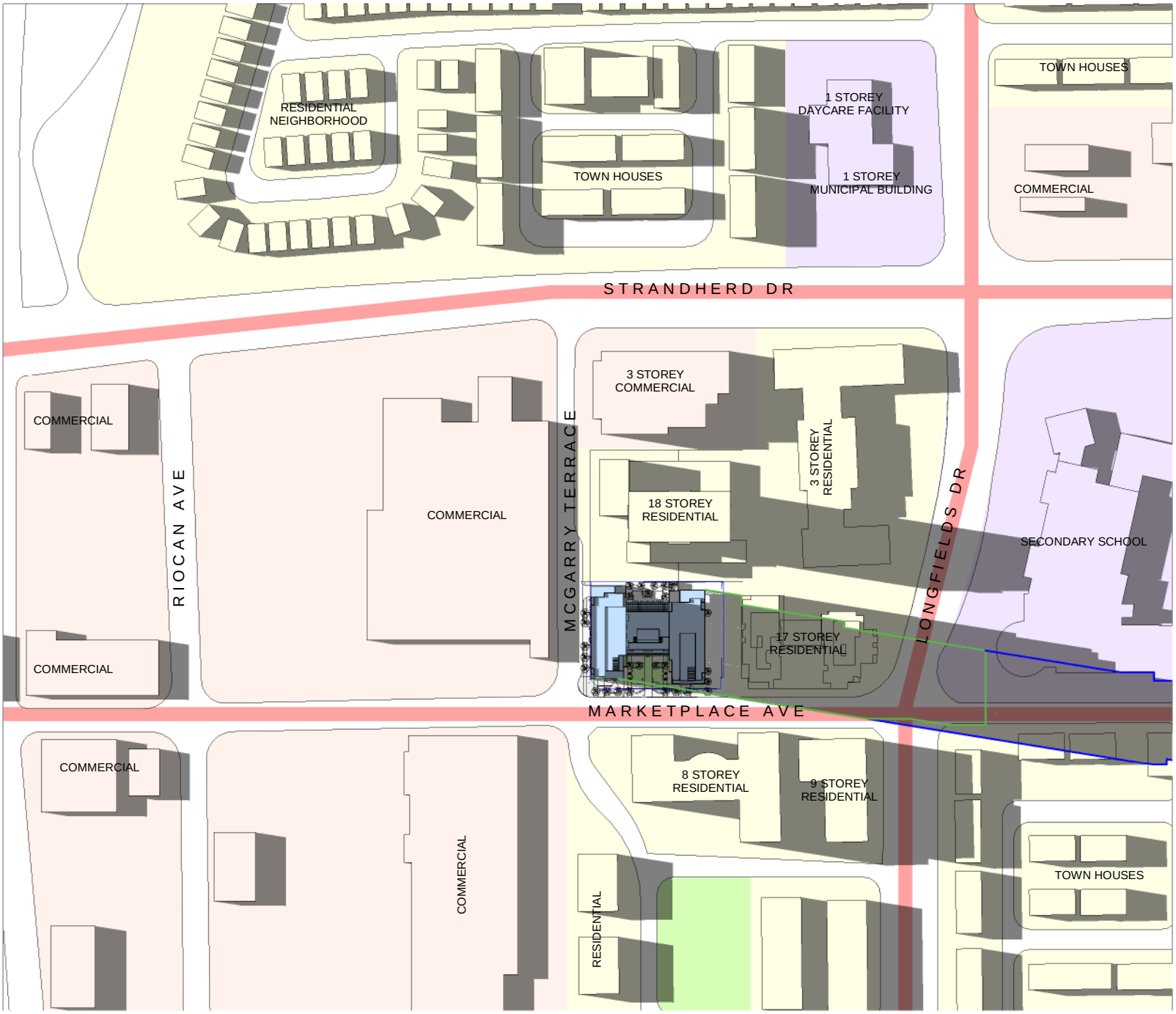

PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT EAST PAST THE ADJACENT 17 STOREY BUILDING OVER LONGFIELDS DR. TO THE SECONDARY SCHOOL TO THE RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE WEST TOWERS SHADOW IS CAST OVER ABOUT 60% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 5PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
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WINDSOR, ON N8N2M1
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PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST OVER MARKETPLACE AVE, PAST THE ADJACENT 17 & 9 STOREY BUILDINGS OVER LONGFIELDS DR. TOTHE NEIGHBORING RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE WEST TOWERS SHADOW IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	SEPT 21, 2010
ISSUE DATE:	SEPT 13, 2023

FALL EQUINOX- SEPT 21ST- 6PM (EDT)

MARKET PLACE WEST

TRUE NORTH

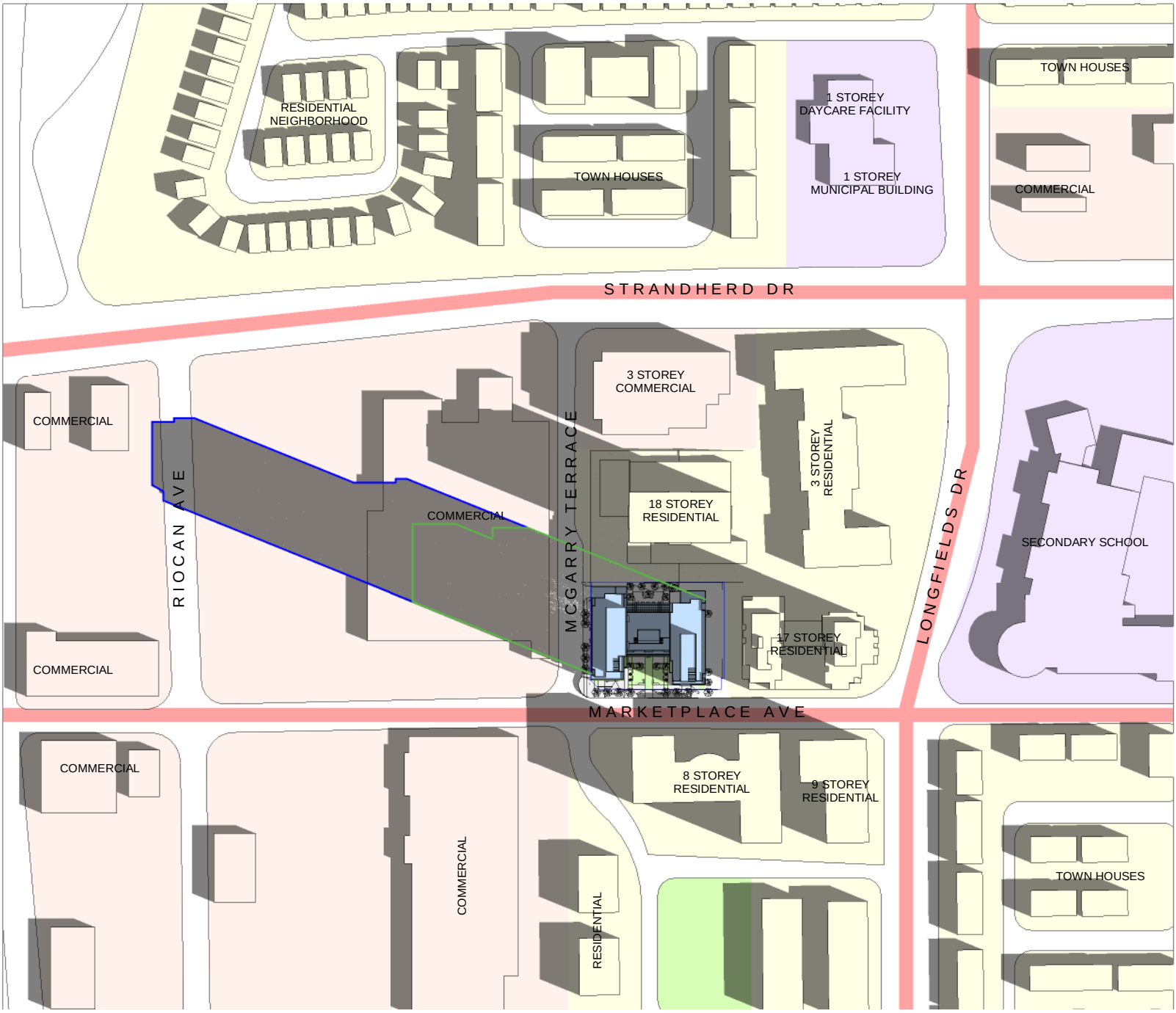
PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607

SUMMER SOLSTICE- JUNE 21ST- 8AM-8PM (EDT)

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



- PROPOSED BUILDING
- PROPOSED SHADOW OUTLINE
- AS OF RIGHT SHADOW OUTLINE
- MAJOR ROADWAYS
- PUBLIC SPACES
- RESIDENTIAL
- COMMERCIAL
- SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW CROSSES OVER MCGARRY TERREACE IN A NORTHWESTERNLY DIRECTION. IT CASCASDES PRIMARILY OVER THE BACK OF THE NEIGHBORING COMMERCIAL DEVELOPMENT AND PARKING LOT AND TERMINATES AT RIOCAN AVE.. THE EAST TOWERS SHADOW IS CAST OVER ABOUT 50% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

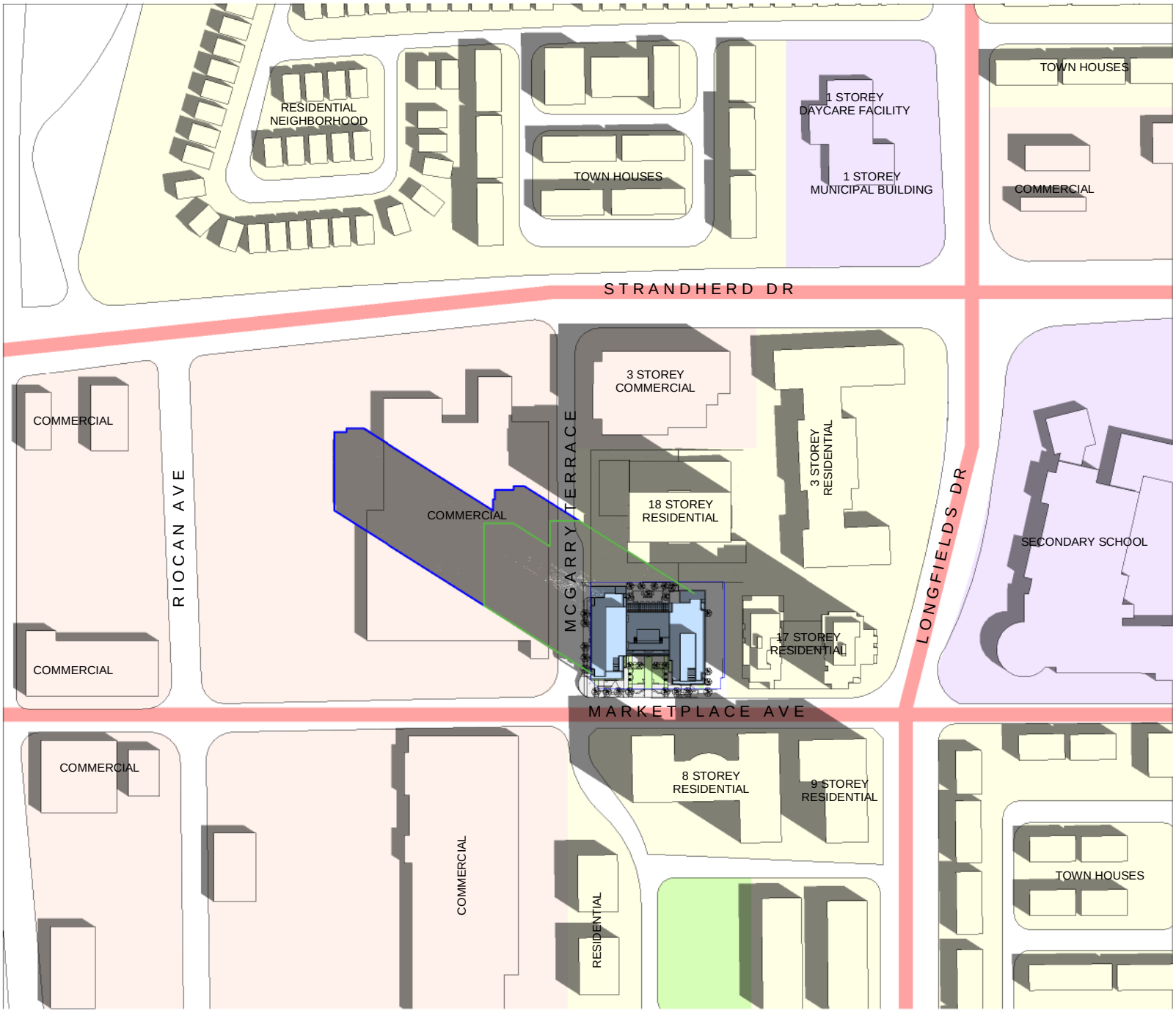
SUMMER SOLSTICE- JUNE 21ST- 8AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW CROSSES OVER MCGARRY TERREACE IN A NORTHWESTERNLY DIRECTION. IT CASCASDES PRIMARILY OVER THE BACK OF THE NEIGHBORING COMMERCIAL DEVELOPMENT AND PARKING LOT. THE EAST TOWERS SHADOW IS CAST OVER ABOUT 30% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

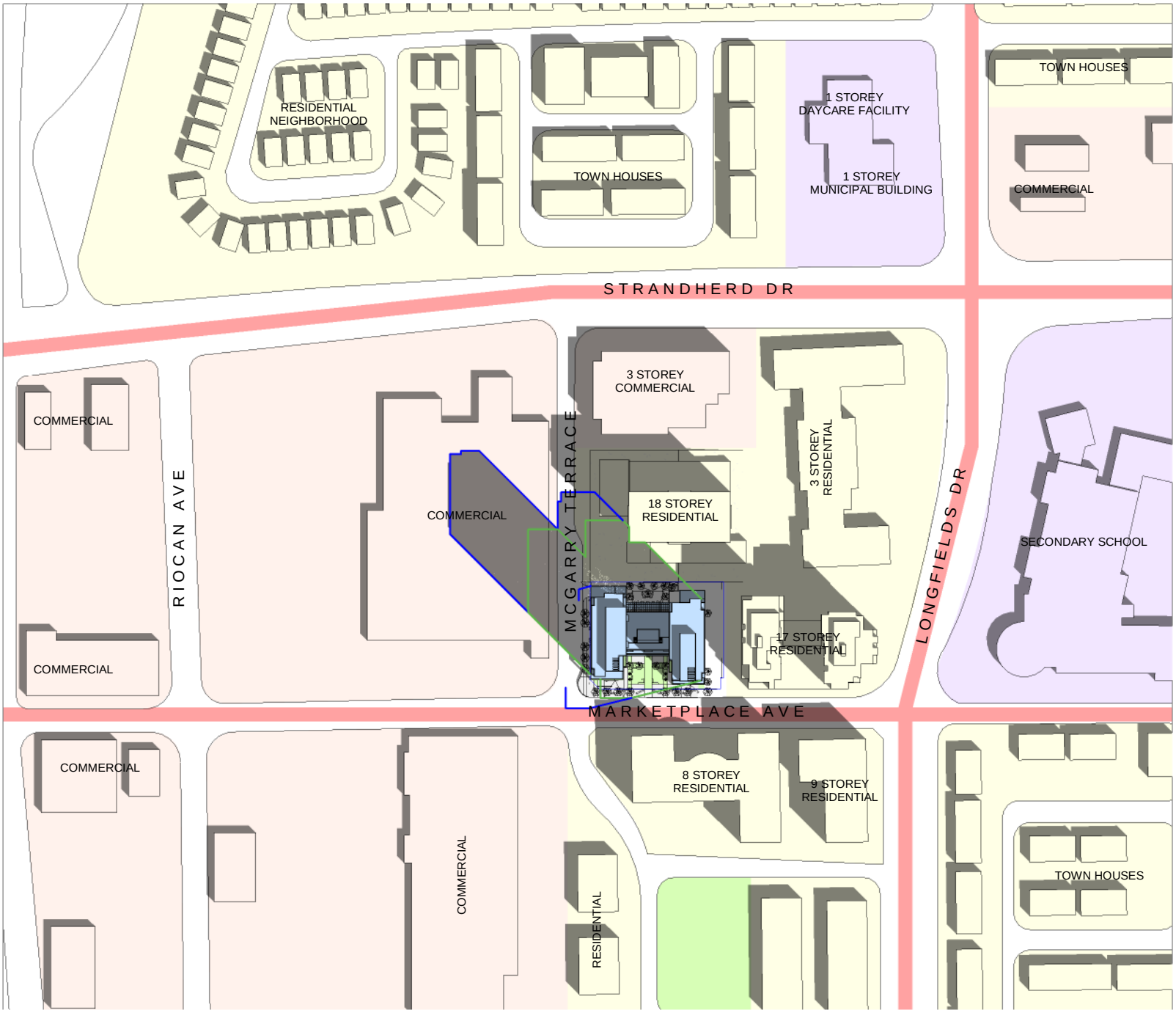
SUMMER SOLSTICE- JUNE 21ST- 9AM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW CROSSES OVER MCGARRY TERREACE IN A NORTHWESTERNLY DIRECTION. IT TERMINATES ON THE ROOF OF THE NEIGHBORING COMMERCIAL DEVELOPMENT. THE EAST TOWERS SHADOW IS CAST OVER ABOUT 20% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

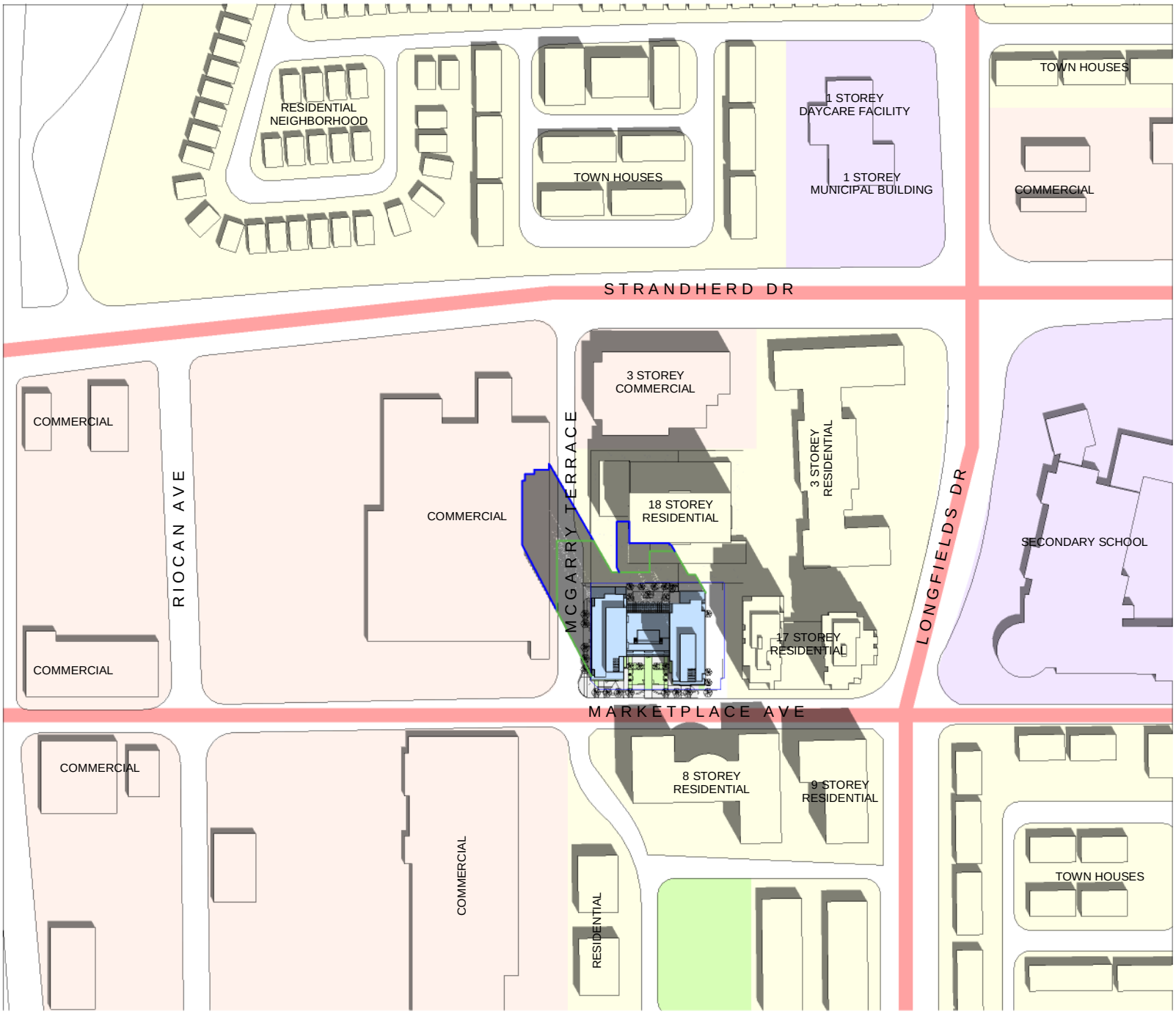
SUMMER SOLSTICE- JUNE 21ST- 10AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW CROSSES OVER MCGARRY TERREACE IN A NORTHWESTERNLY DIRECTION. THE WEST TOWERS SHADOW TERMINATES ON THE ROOF OF THE NEIGHBORING COMMERCIAL DEVELOPMENT. THE EAST TOWER TERMINATES AT THE ADJACENT 18 STOREY RESIDENTIAL BUILDING TO THE NORTH. THE EAST TOWERS SHADOW IS CAST OVER ABOUT 10% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

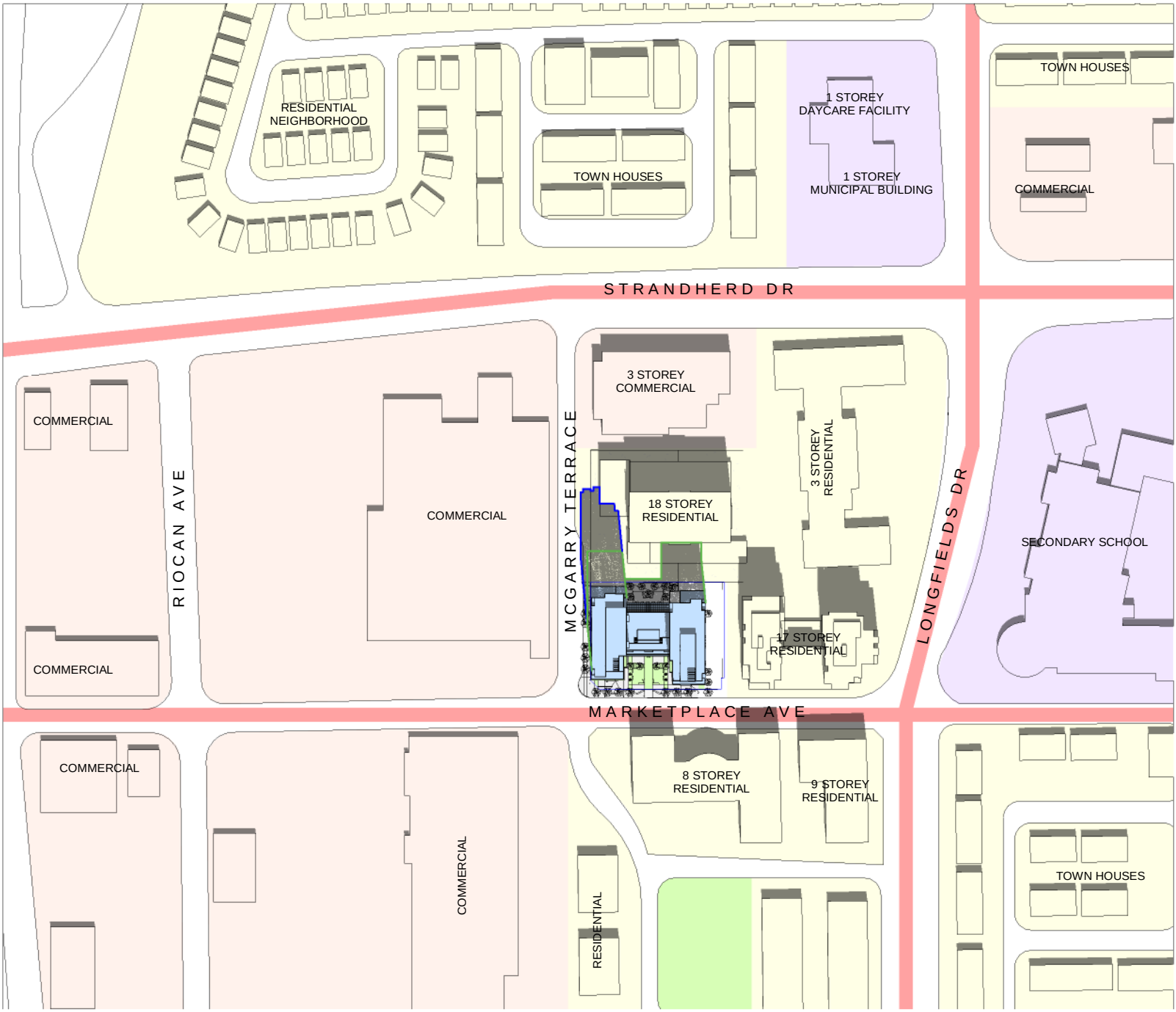
SUMMER SOLSTICE- JUNE 21ST- 11AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECTS NORTH TO THE ADJACENT 18 STOREY RESIDENTIAL BUILDING. THE EASTER TOWER SEEMS TO TERMINATE AT THE FACE OF THE ADJACENT 18 STOREY BUILDING.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

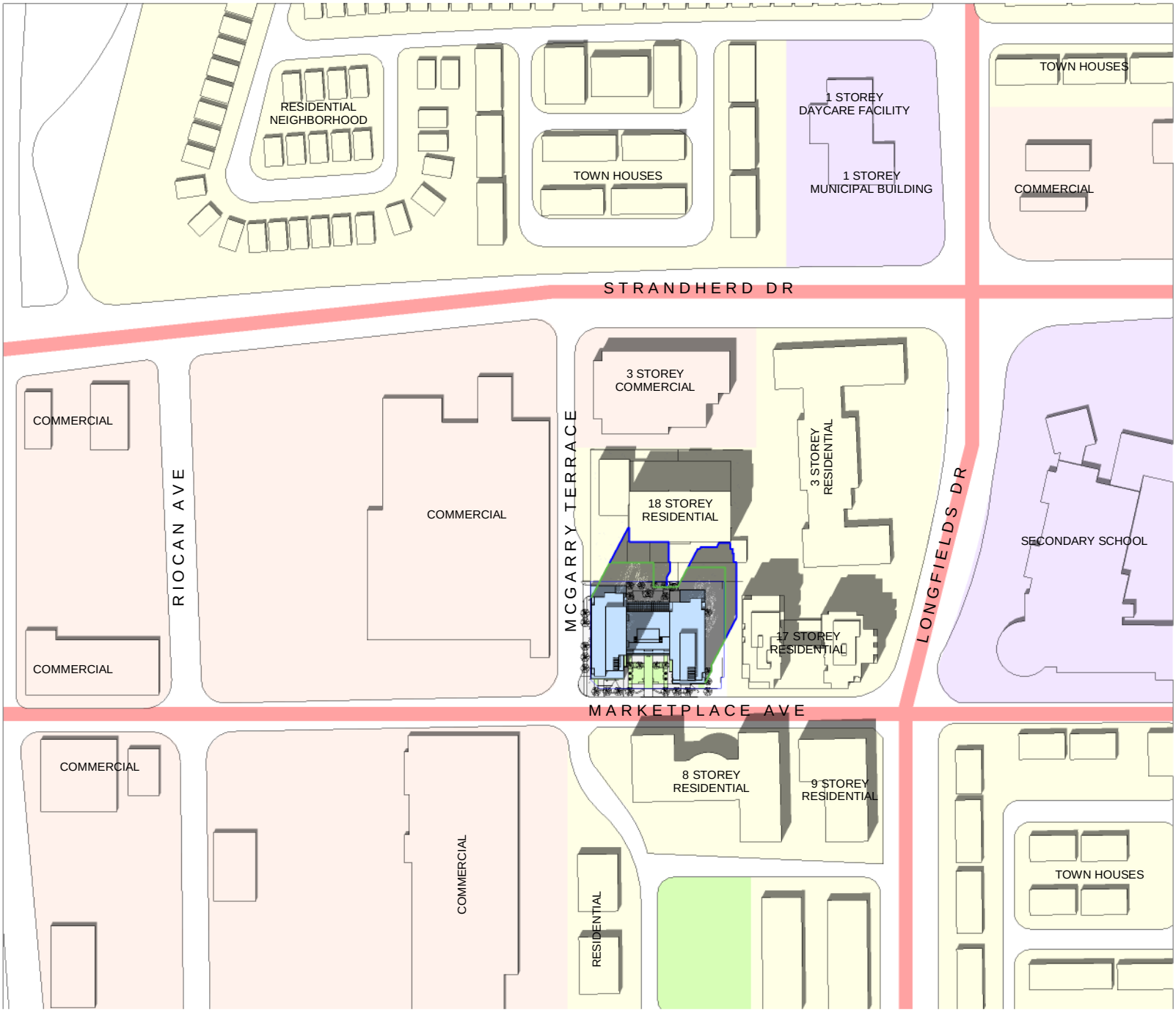
SUMMER SOLSTICE- JUNE 21ST- 12PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILING PROJECTS NORTH TO THE ADJACENT 18 STOREY RESIDENTIAL BUILDING. THE EASTERN TOWER SEEMS TO TERMINATE ON THE FACE OF THE ADJACENT 18 STOREY BUILDING.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

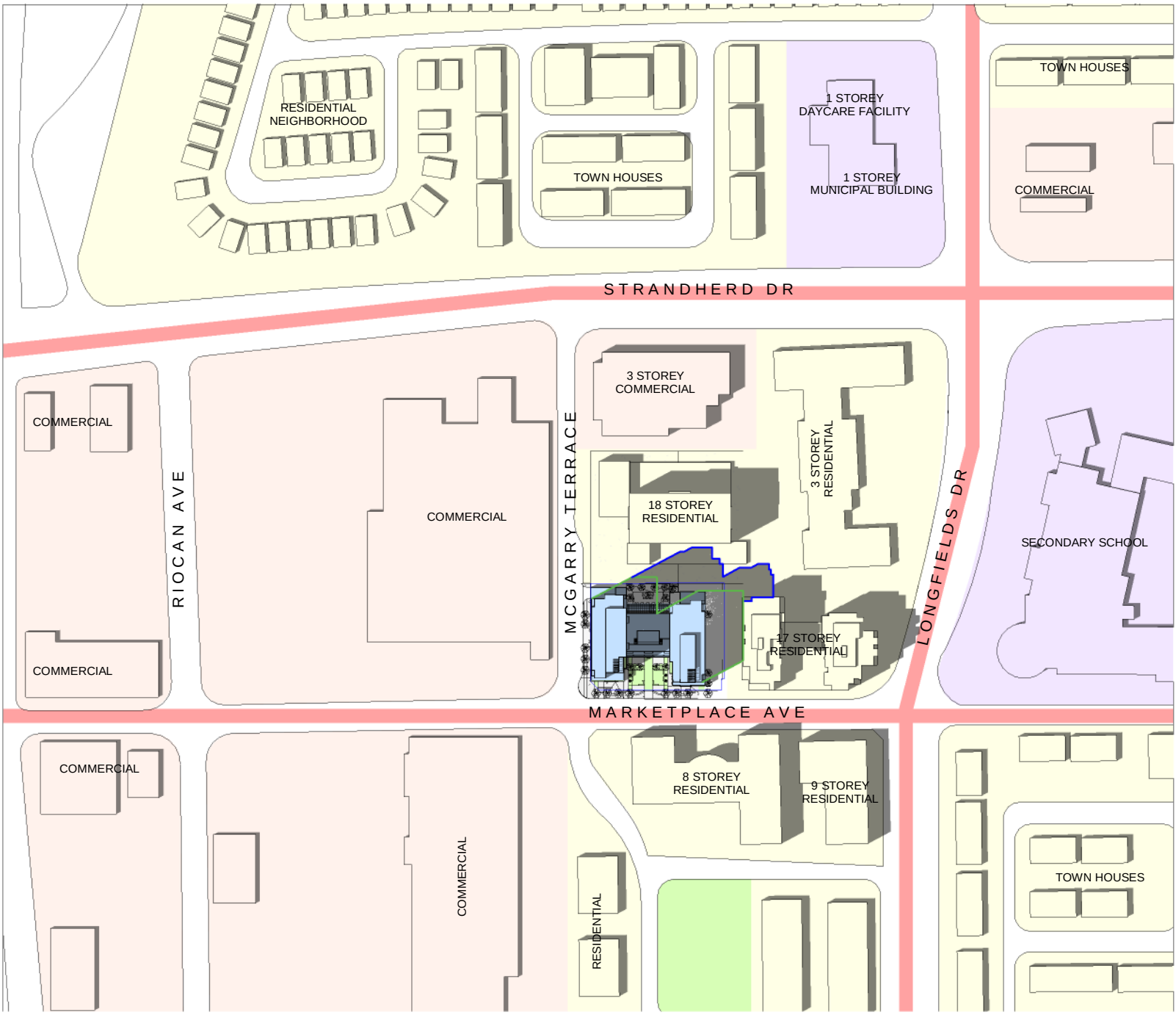
SUMMER SOLSTICE- JUNE 21ST- 1PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILING PROJECTS NORTHEAST TOWARDS THE 18 STOREY RESIDENTIAL BUILDING.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

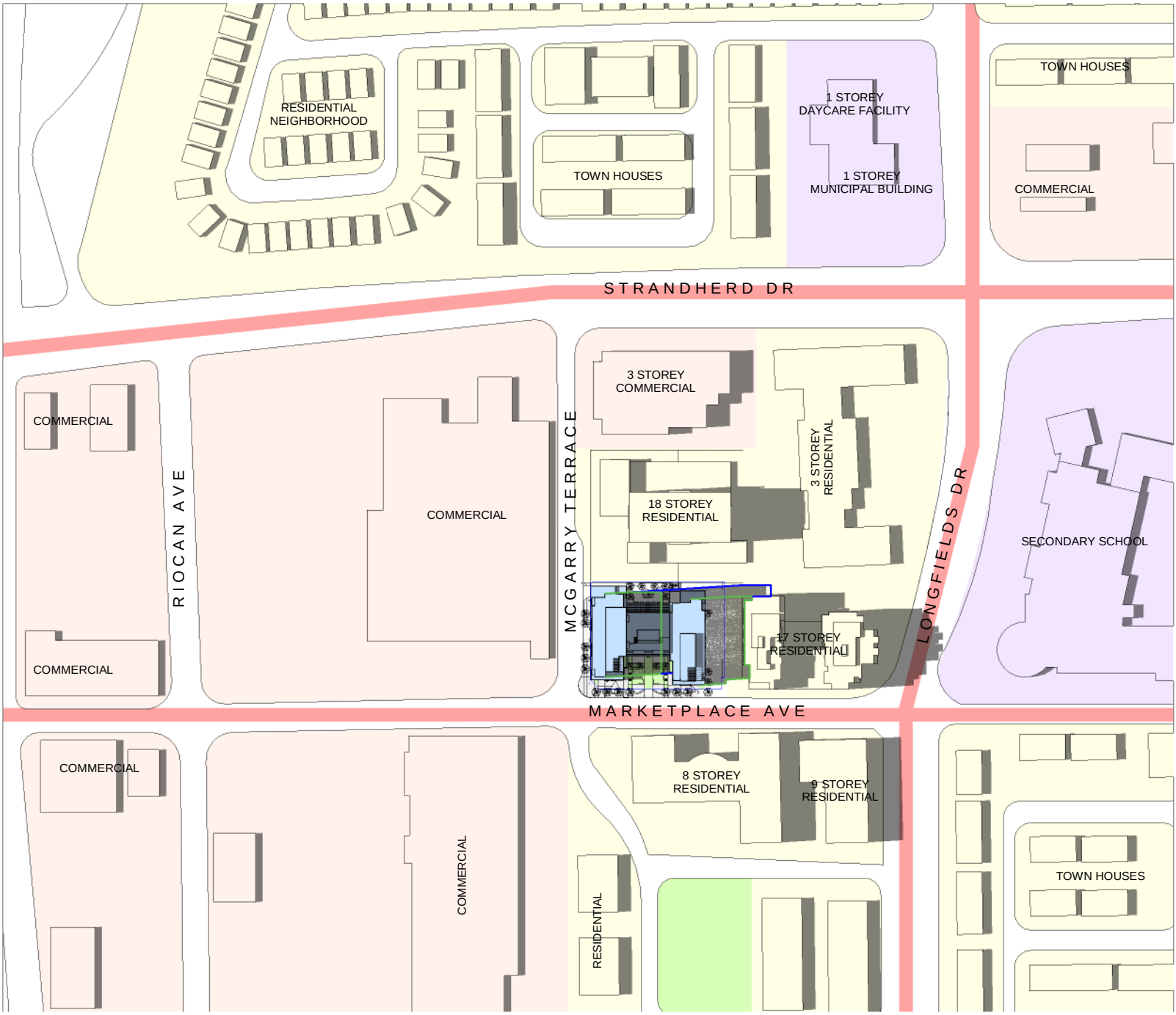
SUMMER SOLSTICE- JUNE 21ST- 2PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILING PROJECTS EAST TO THE ADJACENT 17 STOREY RESIDENTIAL BUILDING. THE WEST TOWER SHADOW IS CAST OVER ABOUT 40% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

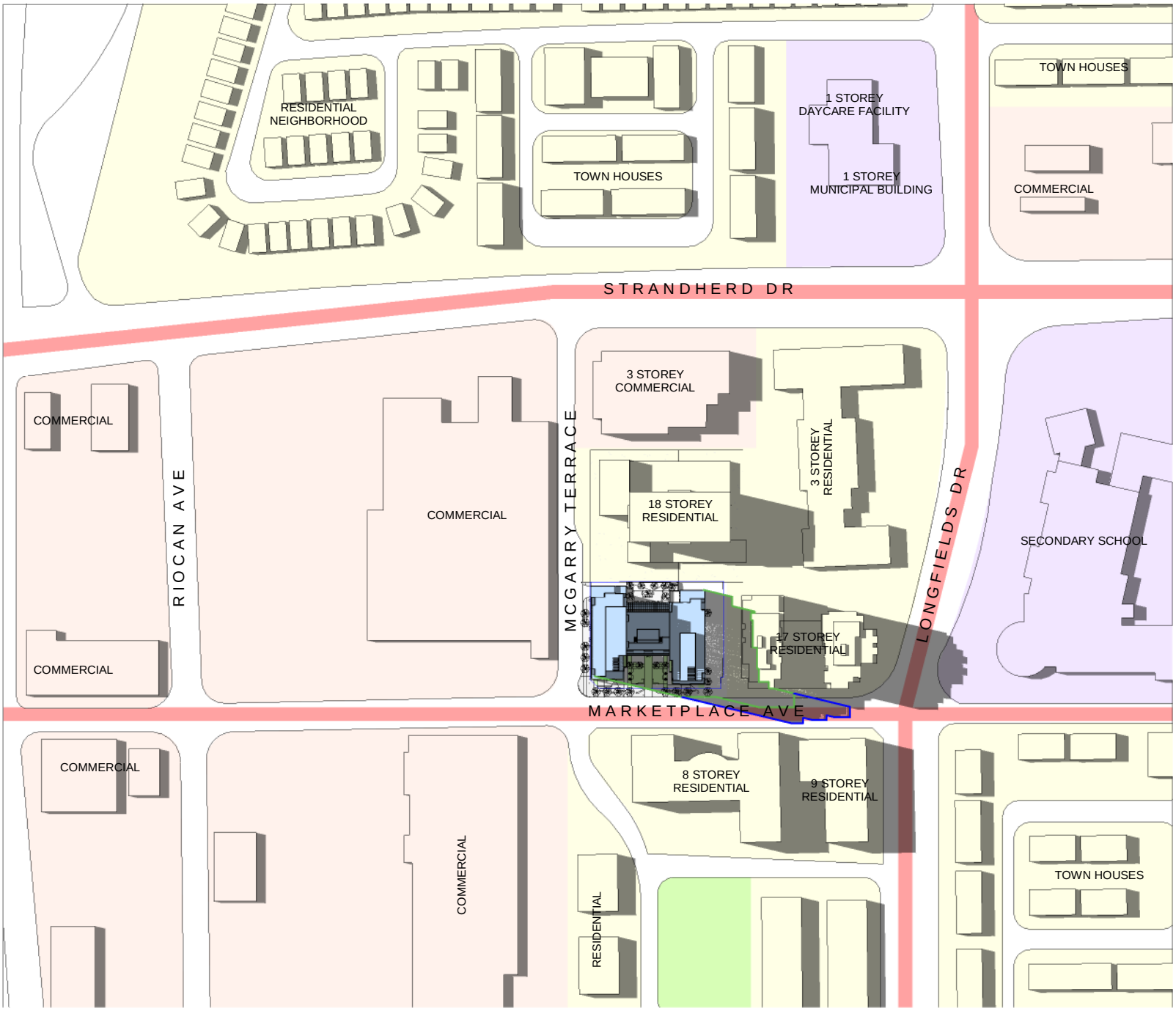
SUMMER SOLSTICE- JUNE 21ST- 3PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST TO MARKETPLACE AVE. THE EAST TOWER SHADOW IS CAST OVER A PORTION OF THE 17 STOREY RESIDENTIAL BUILDING TO THE EAST. THE WEST TOWERS SHADOW IS CAST OVER ABOUT 90% OF THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

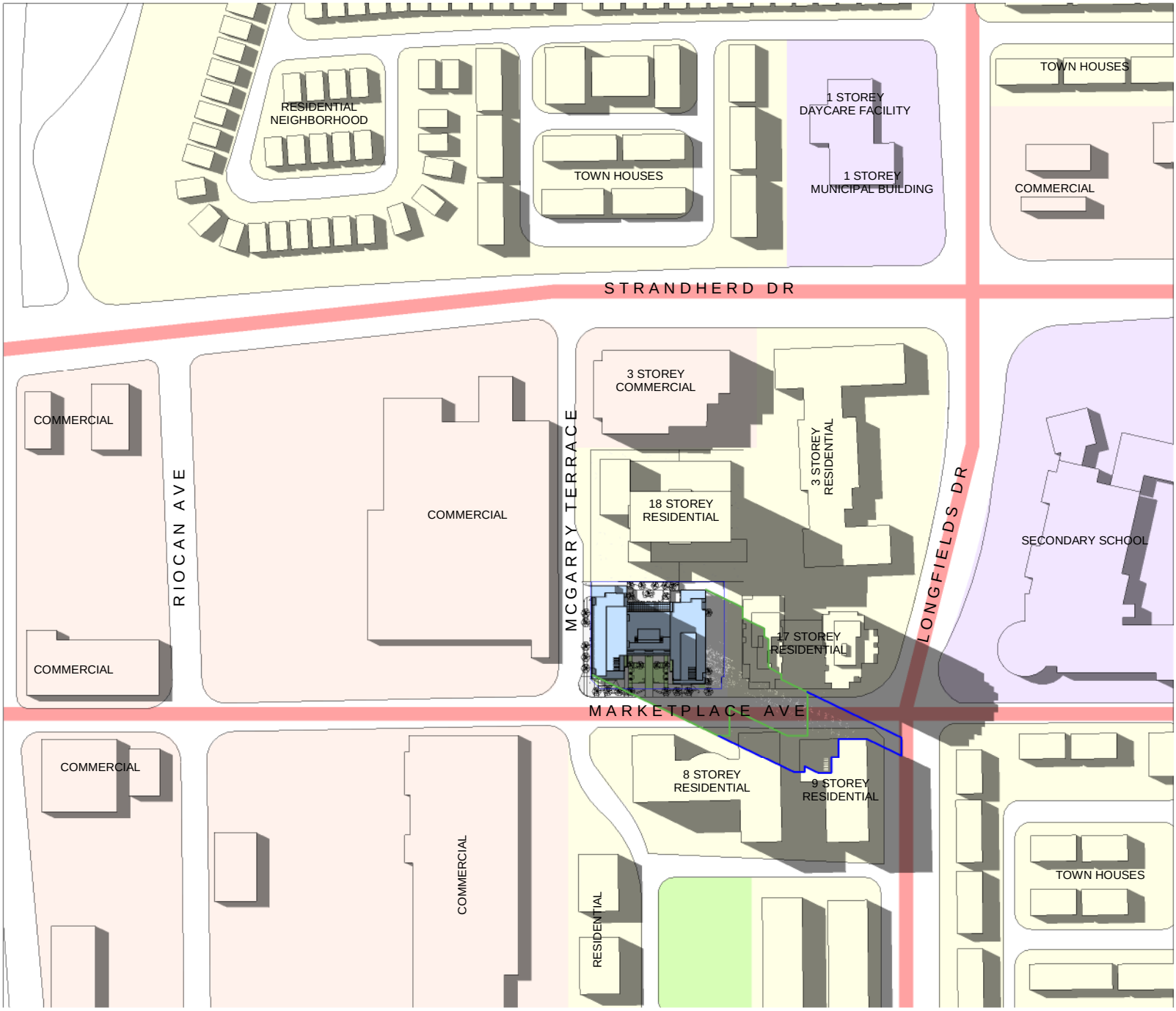
SUMMER SOLSTICE- JUNE 21ST- 4PM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST OVER MARKETPLACE AVE. TO THE 8 & 9 STOREY RESIDENTIAL BUILDINGS. THE EAST TOWER SHADOW IS CAST OVER A PORTION OF THE 17 STOREY RESIDENTIAL BUILDING TO THE EAST. THE WEST TOWERS SHADOW IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

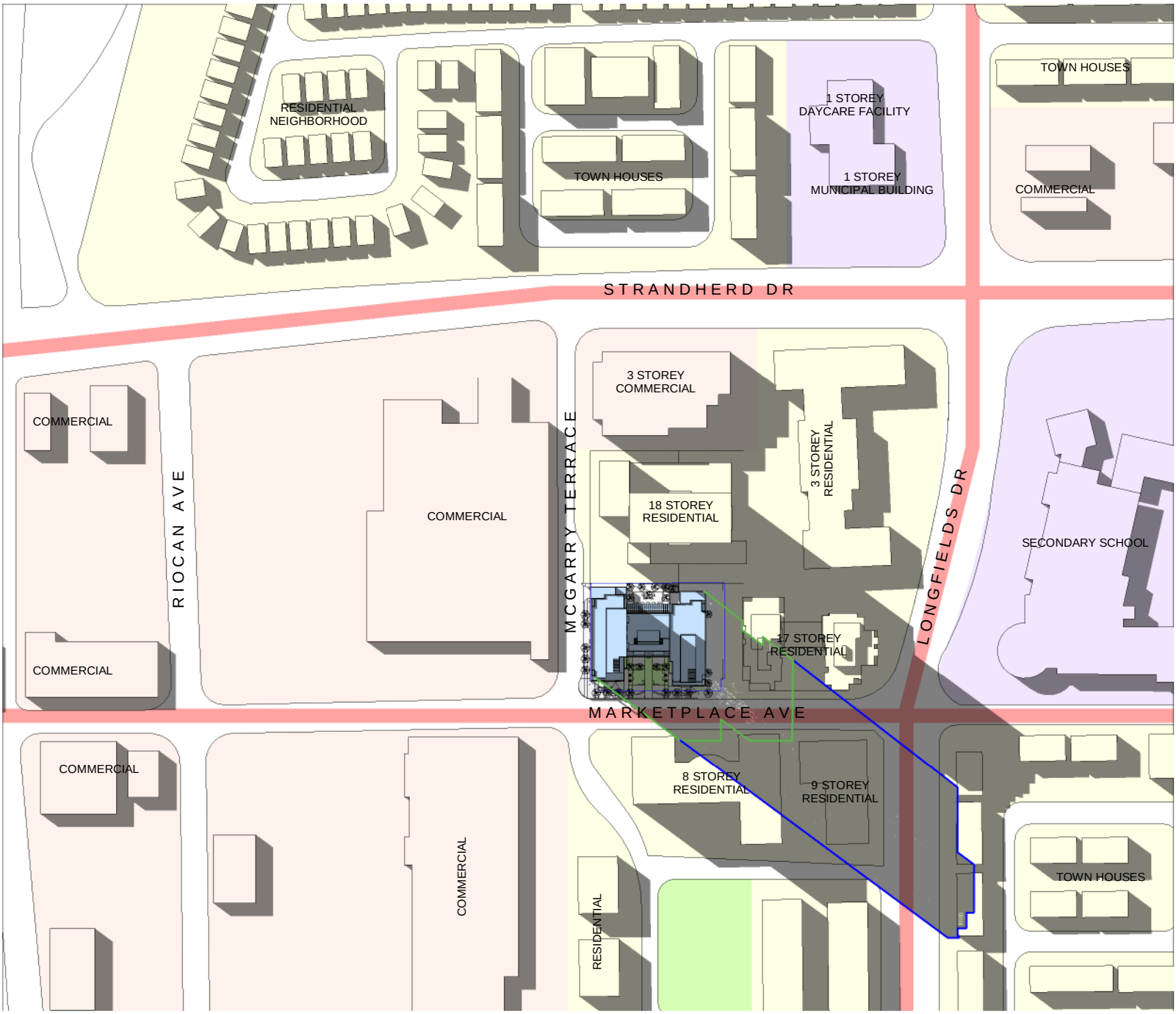
SUMMER SOLSTICE- JUNE 21ST- 5PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST OVER MARKETPLACE AVE AND THE 8 & 9 STOREY RESIDENTIAL BUILDINGS AND OVER LONGFIELDS DR. TO THE RESIDENTIAL NEIGHBORHOOD. THE EAST TOWER SHADOW IS CAST OVER A PORTION OF THE 17 STOREY RESIDENTIAL BUILDING TO THE EAST. THE WEST TOWERS SHADOW IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

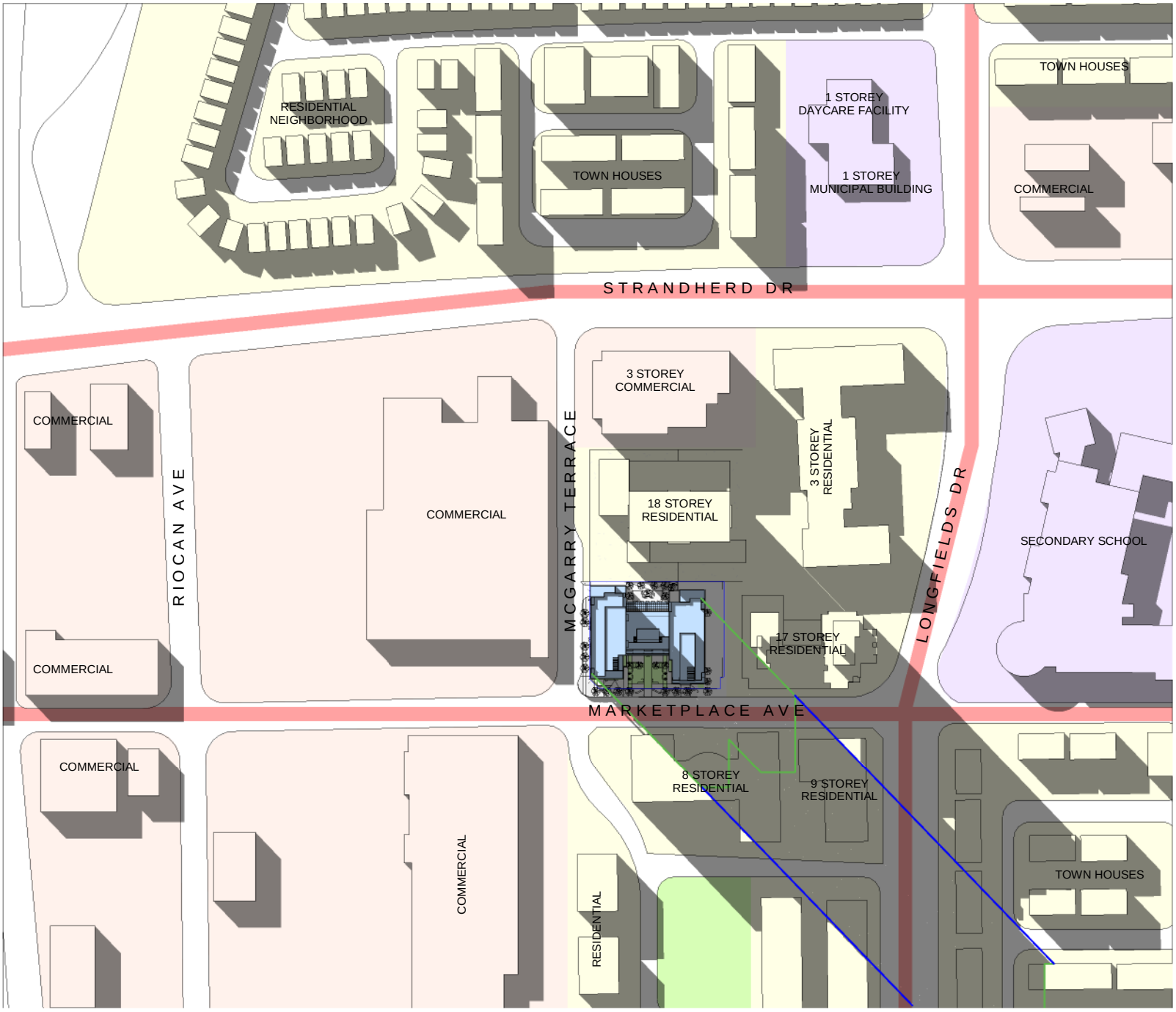
SUMMER SOLSTICE- JUNE 21ST- 6PM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



- PROPOSED BUILDING
- PROPOSED SHADOW OUTLINE
- AS OF RIGHT SHADOW OUTLINE
- MAJOR ROADWAYS
- PUBLIC SPACES
- RESIDENTIAL
- COMMERCIAL
- SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST OVER MARKETPLACE AVE AND THE 8 & 9 STOREY RESIDENTIAL BUILDINGS AND OVER LONGFIELDS DR. TO THE RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE EAST TOWER SHADOW IS CAST OVER A PORTION OF THE 17 STOREY RESIDENTIAL BUILDING TO THE EAST. THE WEST TOWERS SHADOW IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

SUMMER SOLSTICE- JUNE 21ST- 7PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607

PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECT SOUTHEAST OVER MARKETPLACE AVE AND THE 8 & 9 STOREY RESIDENTIAL BUILDINGS AND OVER LONGFIELDS DR. TO THE RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE EAST TOWER SHADOW IS CAST OVER A PORTION OF THE 17 STOREY RESIDENTIAL BUILDING TO THE EAST. THE WEST TOWERS SHADOW IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	JUNE 21, 2010
ISSUE DATE:	SEPT 13, 2023

SUMMER SOLSTICE- JUNE 21ST- 8PM (EDT)

MARKET PLACE WEST

TRUE NORTH

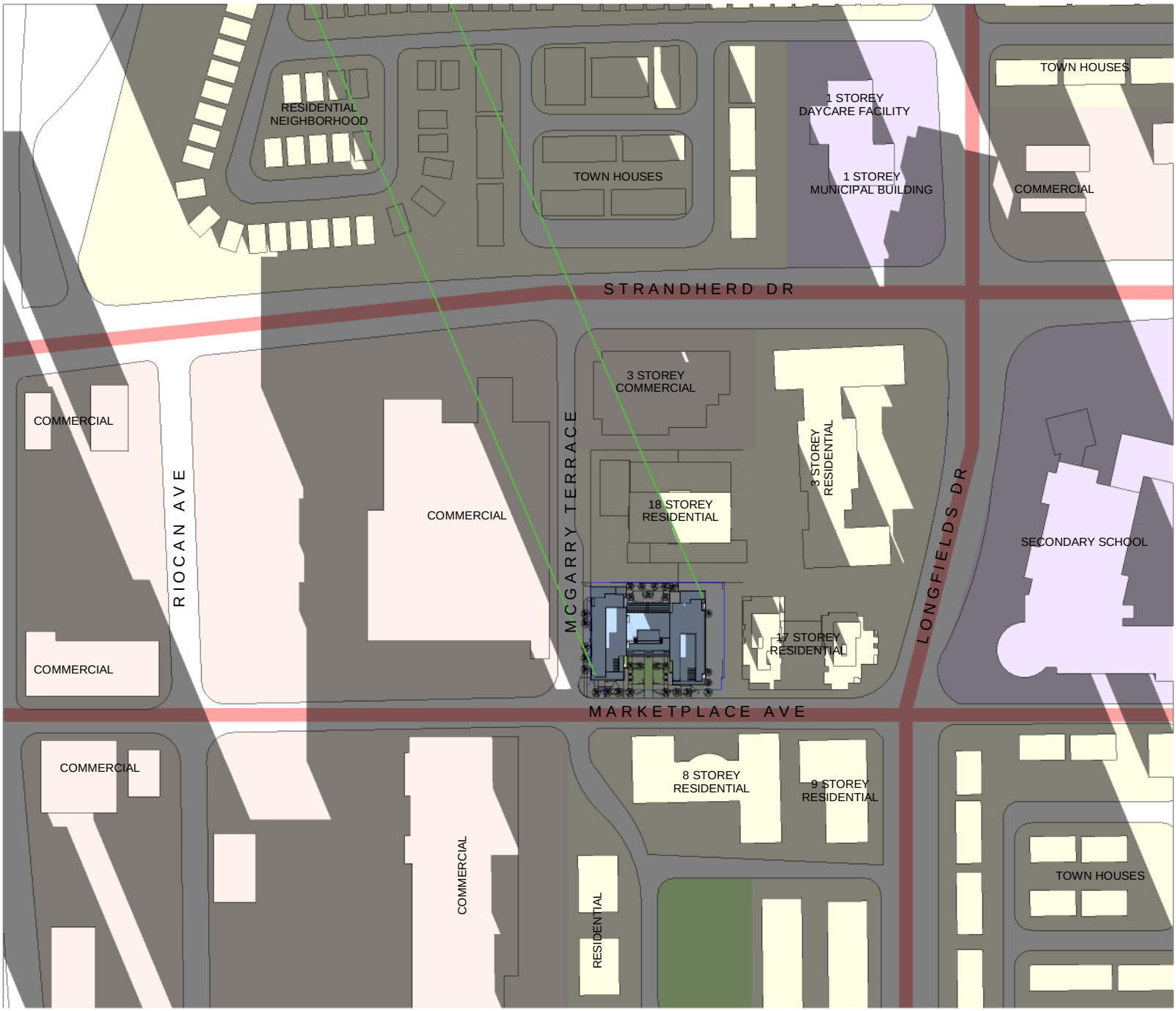
PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607

WINTER SOLSTICE- DEC 21ST- 9AM-3PM (EDT)

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
THE PROPOSED BUILDINGS SHADOW CROSSES STRANDHERD DR. IN A NORTHWESTERNLY DIRECTION AND CASCASDES OVER THE NEIGHBORING COMMERCIAL DEVELOPMENTS AND PARKING LOT AND OVER THE RESIDENTIAL AREA AND BEYOND THE TEST AREA. THE 8 STOREY RESIDENTIAL BUILDING TO SOUTH IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

WINTER SOLSTICE- DEC 21ST- 9AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607

PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW CROSSES STRANDHERD DR. IN A NORTHERN DIRECTION AND CASCASDES OVER THE NEIGHBORING 18 STOREY RESIDENTIAL BUILDING AND 3 STOREY COMMERCIAL BUILDING RESIDENTIAL, RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE 8 STOREY RESIDENTIAL BUILDING TO SOUTH IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

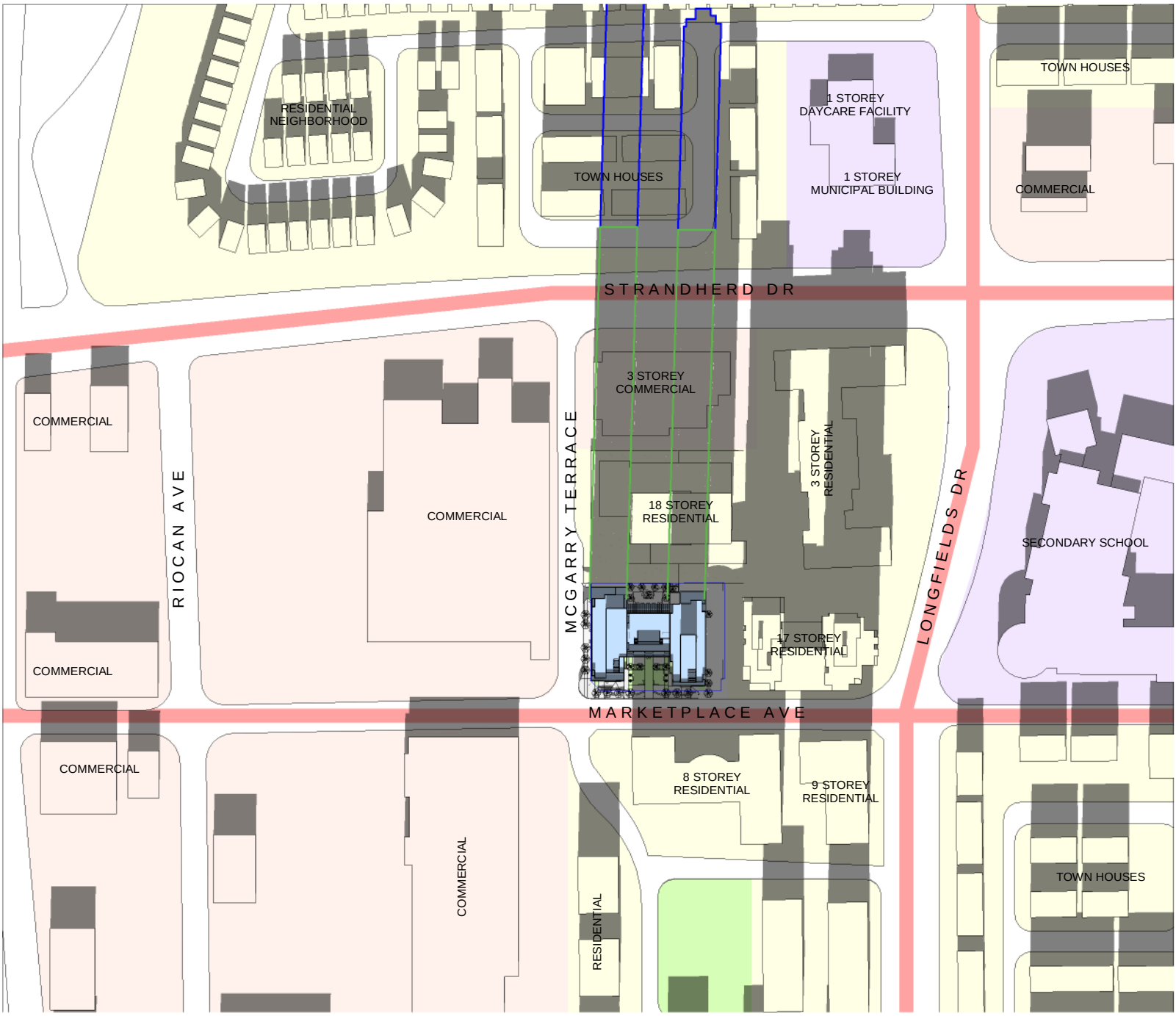
WINTER SOLSTICE- DEC 21ST- 10AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



- PROPOSED BUILDING
- PROPOSED SHADOW OUTLINE
- AS OF RIGHT SHADOW OUTLINE
- MAJOR ROADWAYS
- PUBLIC SPACES
- RESIDENTIAL
- COMMERCIAL
- SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

THE PROPOSED BUILDINGS SHADOW CROSSES STRANDHERD DR. IN A NORTHERN DIRECTION AND CASCASDES OVER THE NEIGHBORING 18 STOREY RESIDENTIAL BUILDING AND 3 STOREY COMMERCIAL BUILDING RESIDENTIAL, RESIDENTIAL NEIGHBORHOOD AND BEYOND THE TEST AREA. THE 8 STOREY RESIDENTIAL BUILDING TO SOUTH IS CAST OVER THE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

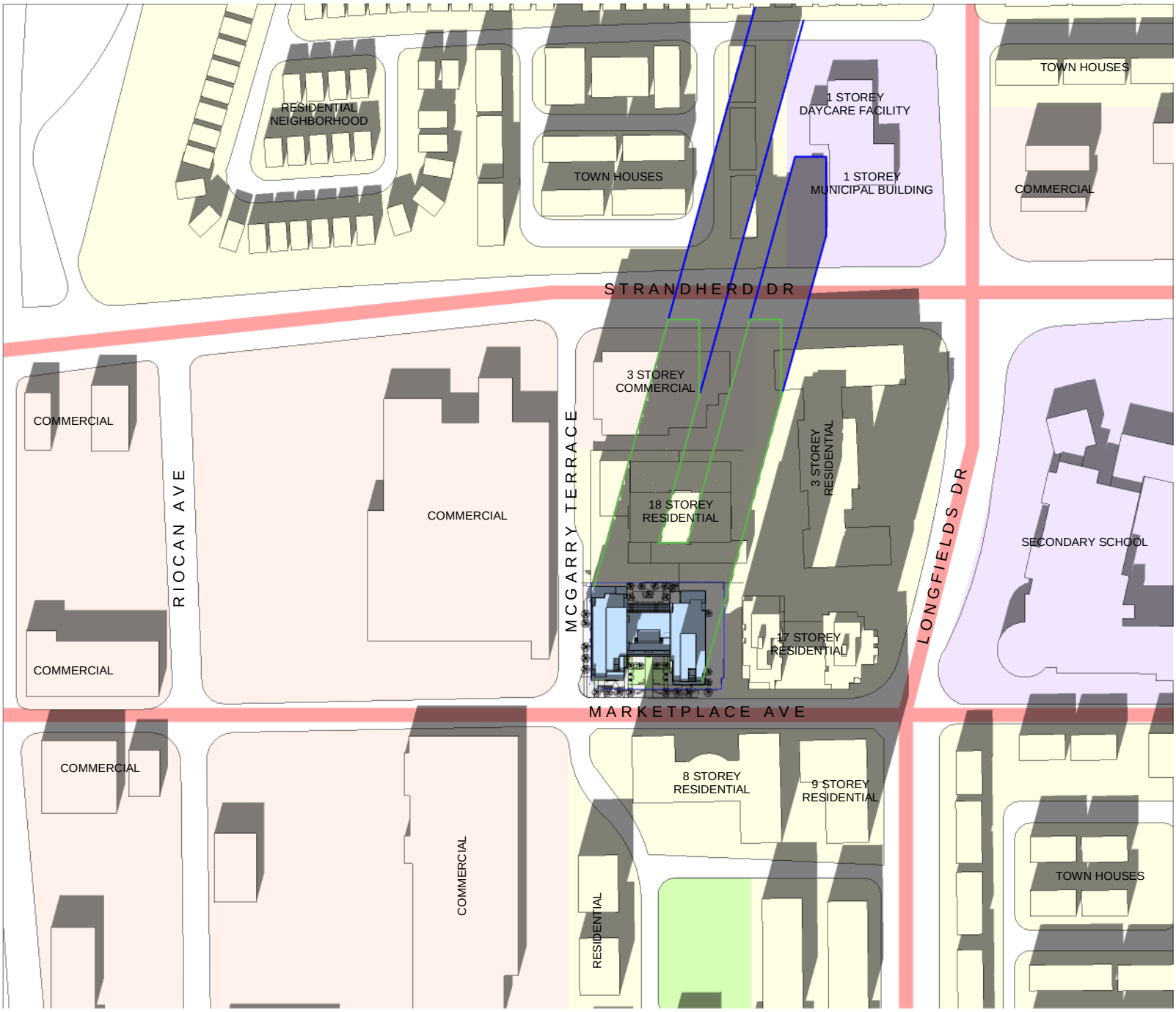
WINTER SOLSTICE- DEC 21ST- 11AM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECTS NORTH TO THE ADJACENT 18 & 3 STOREY RESIDENTIAL BUILDINGS. THE WEST TOWERS PROJECTION CROSSES STRANDHARD DR. TO THE RESIDENTIAL NEIGHBORHOOD. THE EAST TOWER PROJECTS TO THE 1 STOREY MUNICIPAL BUILDING AND TERMINATES IN THE PARKING LOT. THE 8 STOREY RESIDENTIAL BUILDING TO SOUTH IS CAST OVER ABOUT 50% OFTHE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

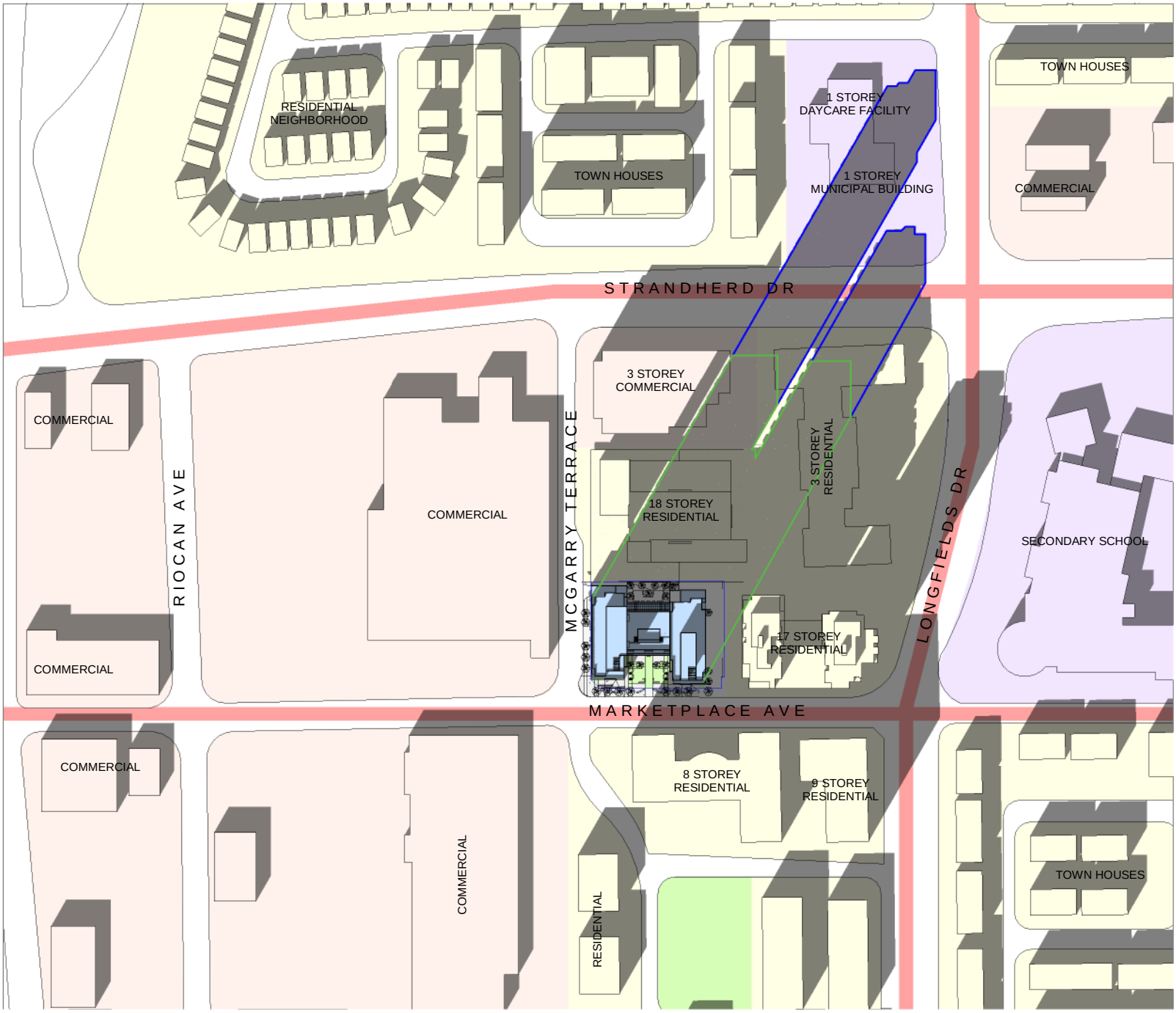
WINTER SOLSTICE- DEC 21ST- 12PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

BOTH TOWERS OF THE PROPOSED BUILDING PROJECTS NORTH TO THE ADJACENT 18 & 3 STOREY RESIDENTIAL BUILDINGS. THE WEST TOWERS PROJECTION CROSSES STRANDHARD DR. TO THE 1 STOREY MUNICIPAL BUILDING AND DAYCARE. THE EAST TOWER PROJECTION CROSSES STRANDHARD DR. AND TERMINATES IN 1 STOREY MUNICIPAL BUILDING PARKING LOT. THE 8 STOREY RESIDENTIAL BUILDING TO SOUTH IS CAST OVER ABOUT 20% OFTHE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

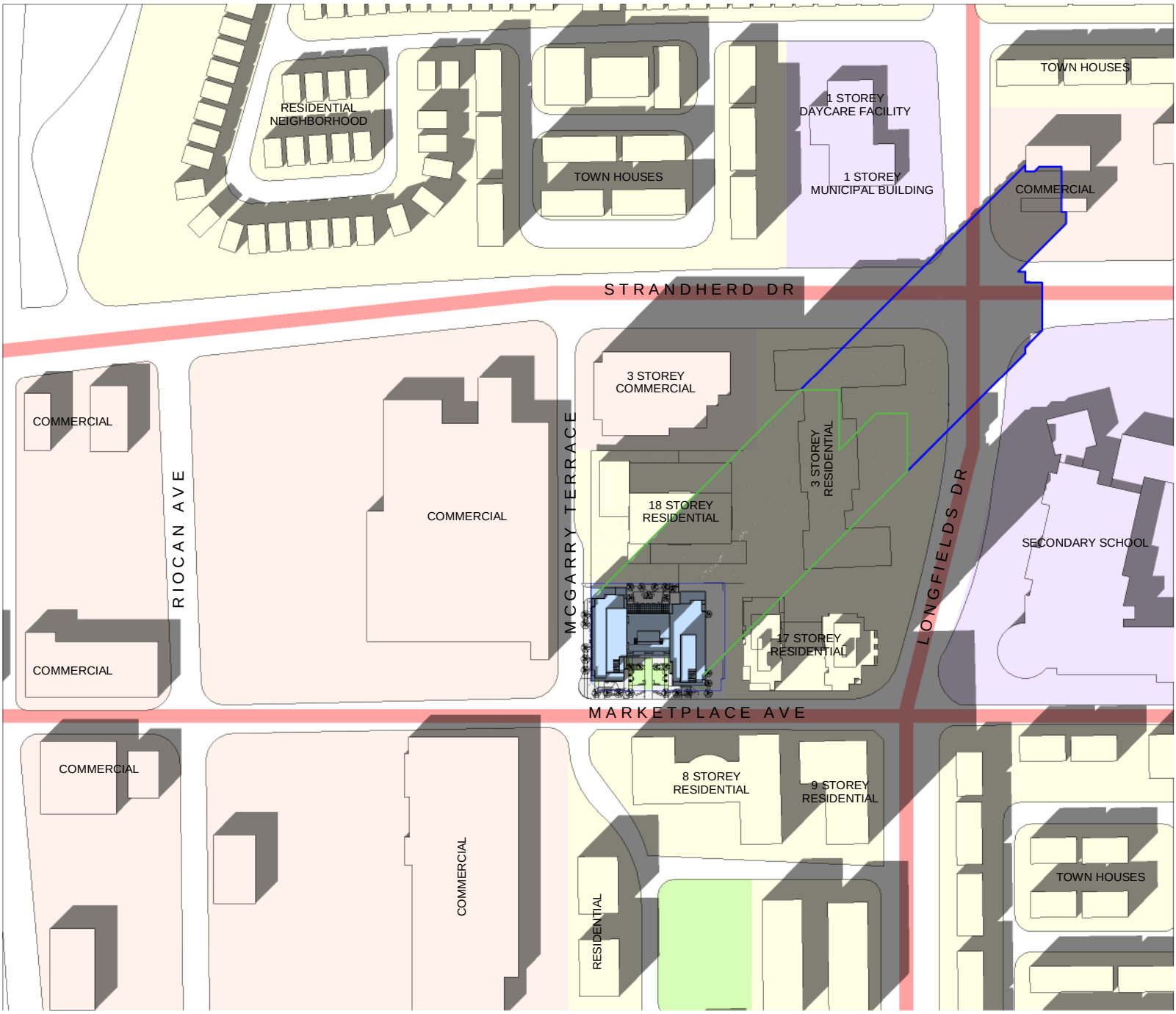
WINTER SOLSTICE- DEC 21ST- 1PM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:

BOTH TOWERS OF THE PROPOSED BUILDING PROJECTS NORTHEASTCASCADING OVER STRANHARD DR AND LONGFIELDS DR. TO THE COMMERCIAL BUILDINGS. THE WEST TOWER IS CAST OVER ABOUT 20% OFTHE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

WINTER SOLSTICE- DEC 21ST- 2PM (EDT)

MARKET PLACE WEST

TRUE NORTH

PROJECT NORTH

PROGRESSIVE ARCHITECTS, LTD.
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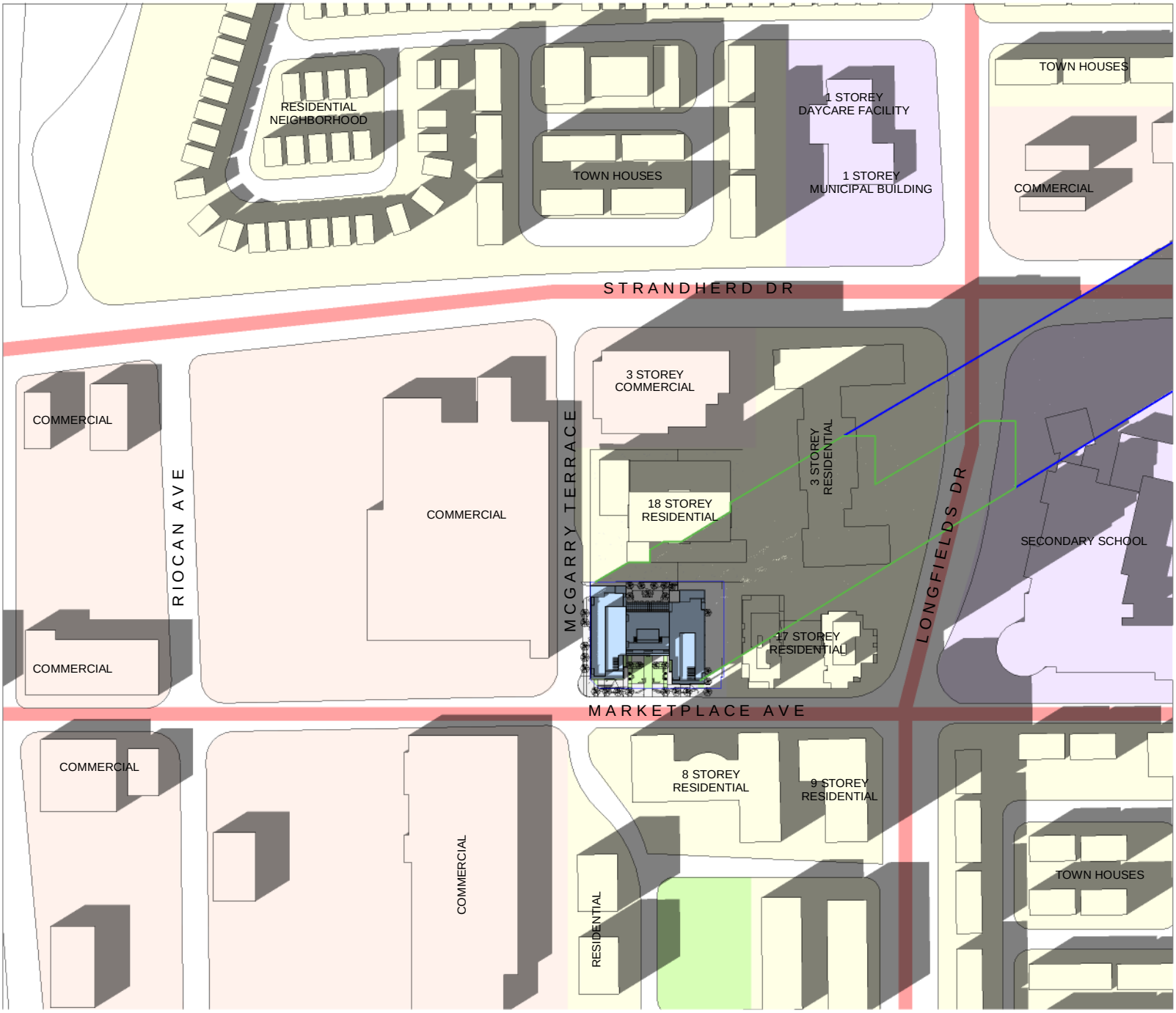
WINDSOR, ON N8N2M1
519-256-1607



PROPOSED BUILDING
PROPOSED SHADOW OUTLINE
AS OF RIGHT SHADOW OUTLINE
MAJOR ROADWAYS
PUBLIC SPACES
RESIDENTIAL
COMMERCIAL
SCHOOL AND MUNICIPAL BUILDINGS

SHADOW ANALYSIS:
BOTH TOWERS OF THE PROPOSED BUILDING PROJECTS NORTHEAST CASCADING OVER STRANHARD DR AND LONGFIELDS DR. PAST THE SECONDARY SCHOOL AND BEYOND THE TEST AREA. THE WEST TOWER IS CAST OVER ABOUT 30% OFTHE PROVIDED POPS.

SCALE:	1:3000
TEST DATE:	DEC 21, 2010
ISSUE DATE:	SEPT 13, 2023

WINTER SOLSTICE- DEC 21ST- 3PM (EDT)

TRUE NORTH

PROJECT NORTH

MARKET PLACE WEST

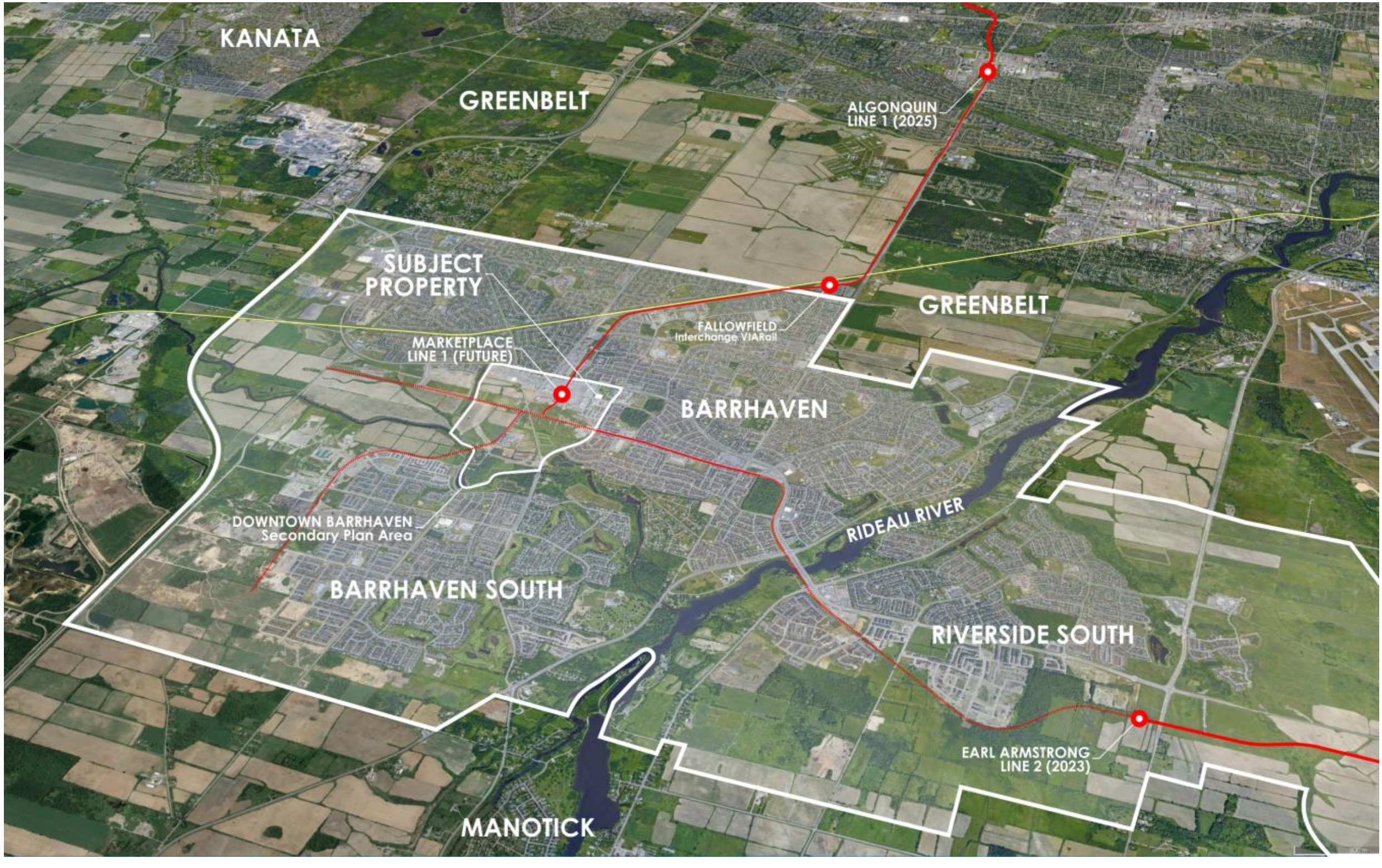
PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42 UNIT C,
WINDSOR, ON N8N2M1
519-256-1607

APPENDIX:

UDRP SUBMISSION- JUNE 2023

PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607

Stantec



PROGRESSIVE ARCHITECTS, LTD.
5255 COUNTY RD. 42, UNIT C, WINDSOR ON, N8N2M1 TEL: 519-256-1607

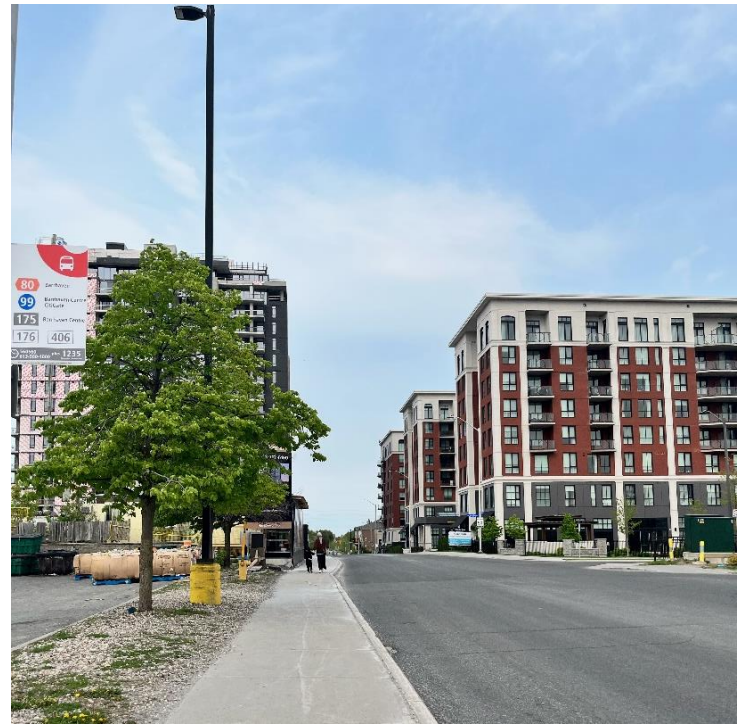
Stantec

LOCATION MAP

MARKETPLACE WEST

SITE CONTEXT AND NEIGHBOURHOOD

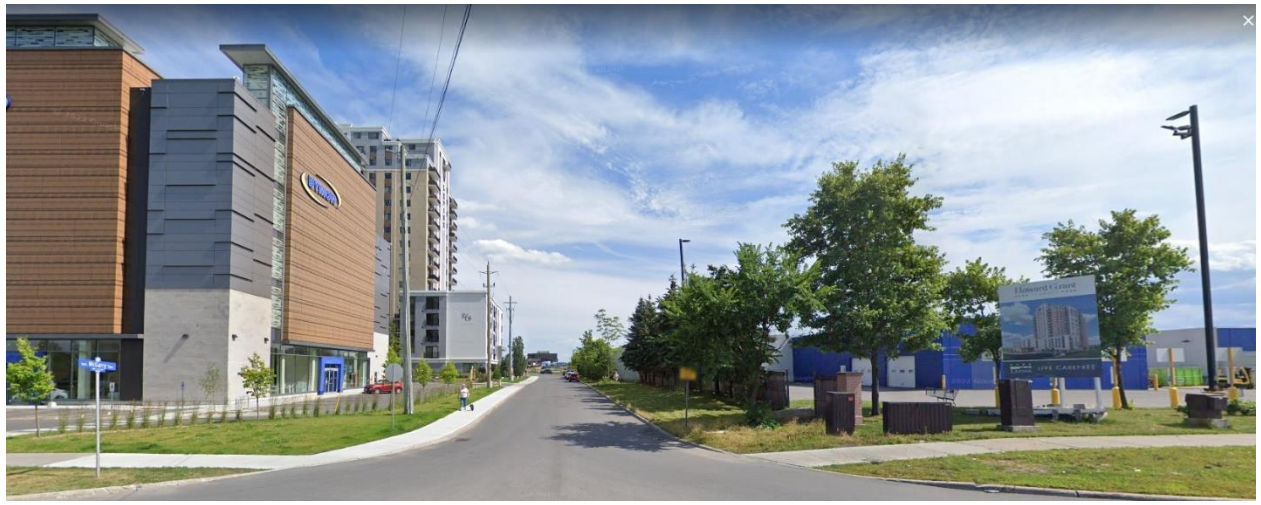
Marketplace Ave looking towards the shopping centre



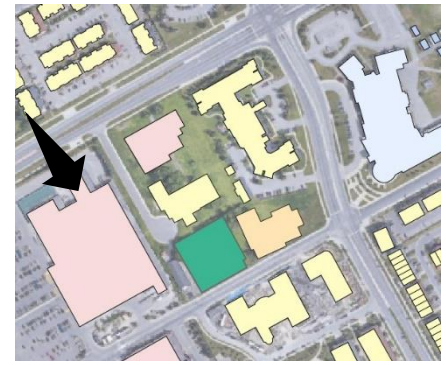
Marketplace Ave looking towards Longfields Drive

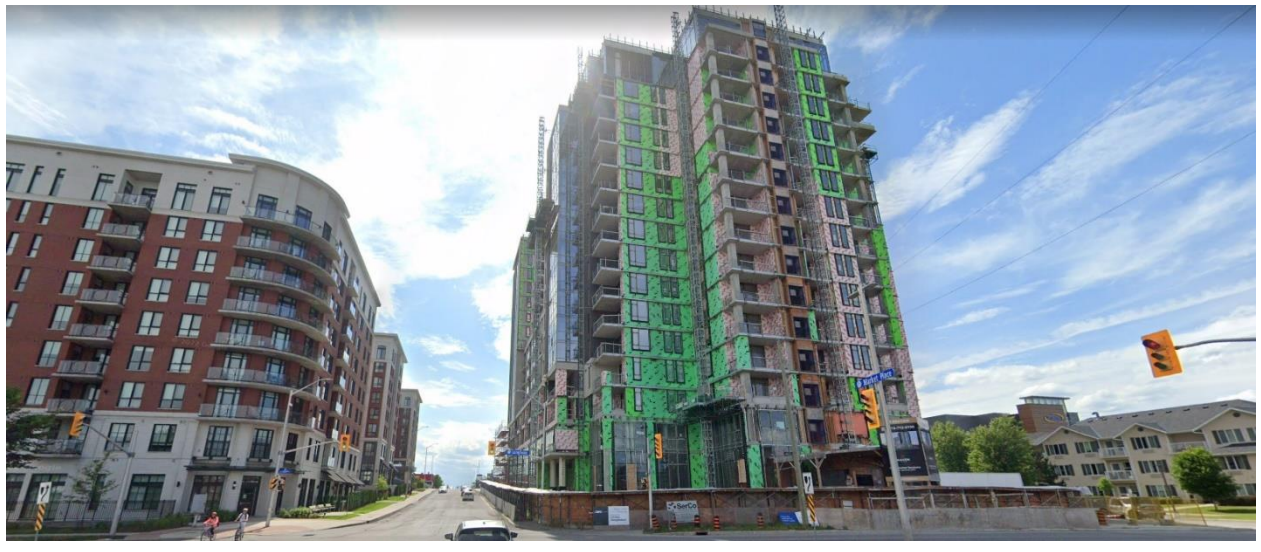
Site is used as a storage area for the adjacent residential building construction

SITE CONTEXT AND NEIGHBOURHOOD

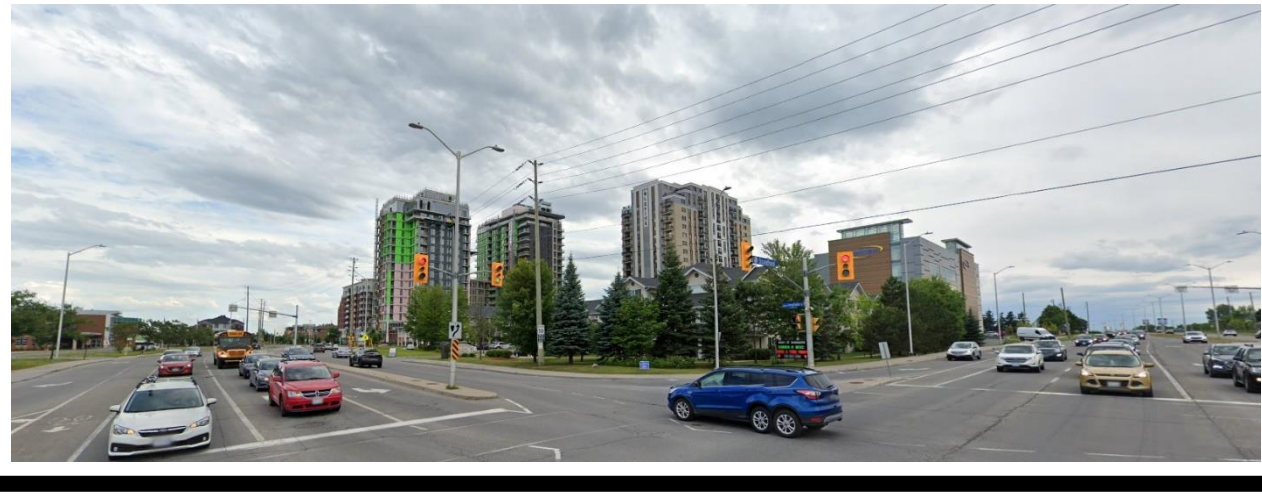


McGarry Terrace looking south from Strandherd Drive. McGarry Terrace is to be extended to Marketplace Avenue





Under construction Haven Towers on Marketplace Avenue, looking west



View from intersection of Strandherd and Longfields looking southwest towards the site

PUBLIC TRANSIT

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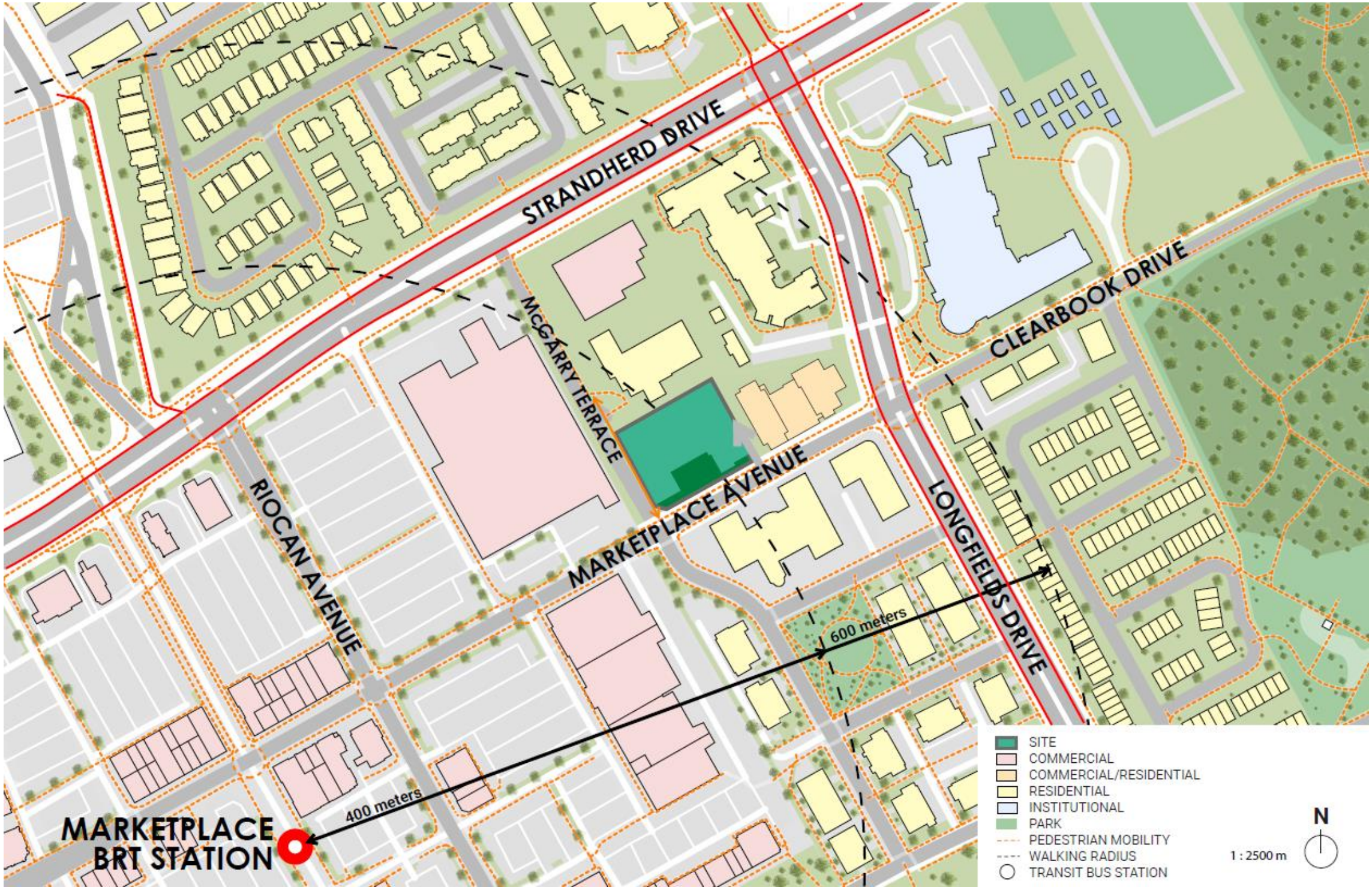
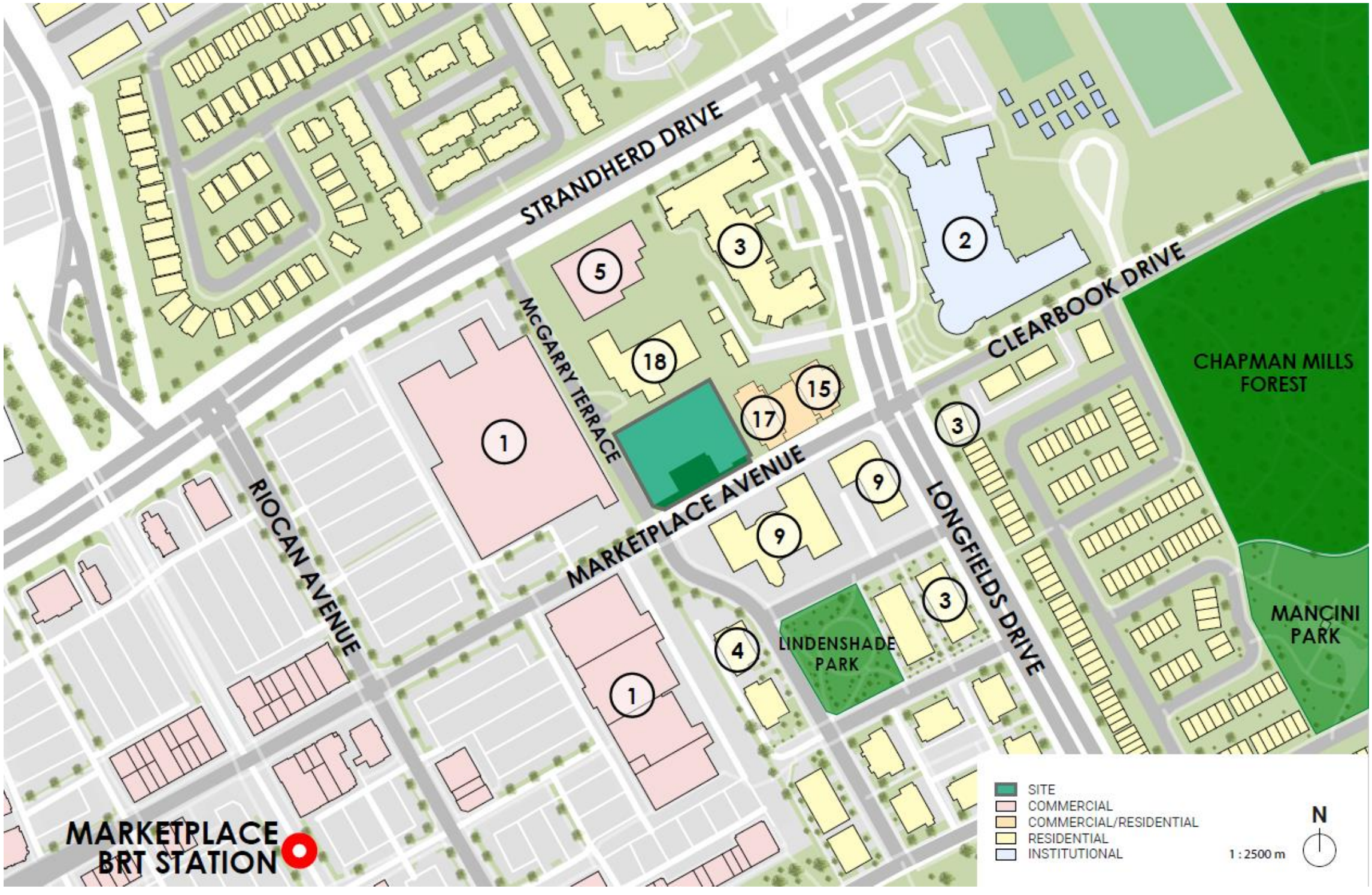
ACTIVE MOBILITY



BUILDING HEIGHTS

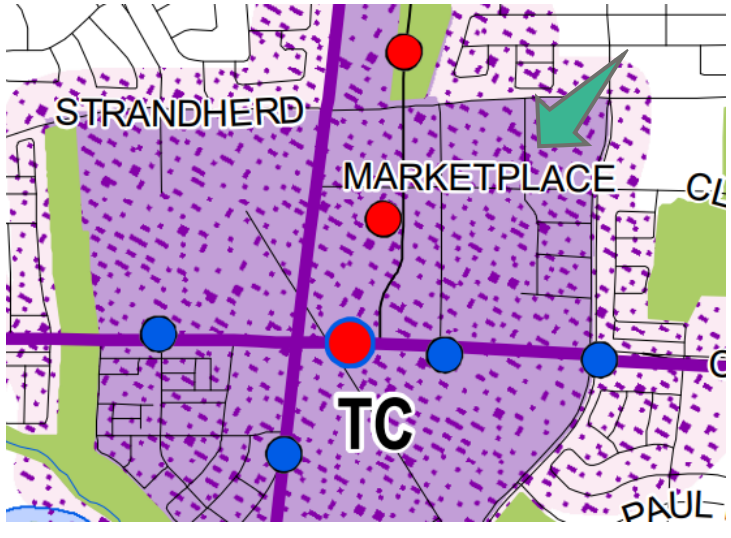


POLICY CONTEXT

OFFICIAL PLAN

SUBURBAN TRANSECT and HUB (TOWN CENTRE)

Hubs are areas centred on planned or existing rapid transit stations and/or frequent street transit stops. The planned function of Hubs is to concentrate a diversity of functions, a higher density of development, a greater degree of mixed uses and a higher level of public transit connectivity than the areas abutting and surrounding the Hub. Hubs are also intended as major employment centres.



BARRHAVEN DOWNTOWN SECONDARY PLAN

MIXED-USE NEIGHBOURHOOD

The site is designated Mixed-Use Neighbourhood under the Barrhaven Downtown Secondary Plan. This designation provides a mixed of uses as well as a transition from higher-to-low densities. The secondary plan commits to evolving and intensifying over time to support Downtown Barrhaven and the transit network in place.

ZONING BY-LAW 2008-250

MIXED-USE CENTRE: MC[2573]

PERMITTED USES
apartment dwelling, high rise
personal service business
retail store
restaurant
service and repair shop
storefront industry
range of commercial service uses

PROPOSED DEVELOPMENT
Mixed-use development two towers (30 and 40 storeys) on an 8-storey podium

PROPOSED SECONDARY PLAN AND ZONING AMENDMENTS
To permit an increase in permitted maximum building height from 30 to 40 storeys

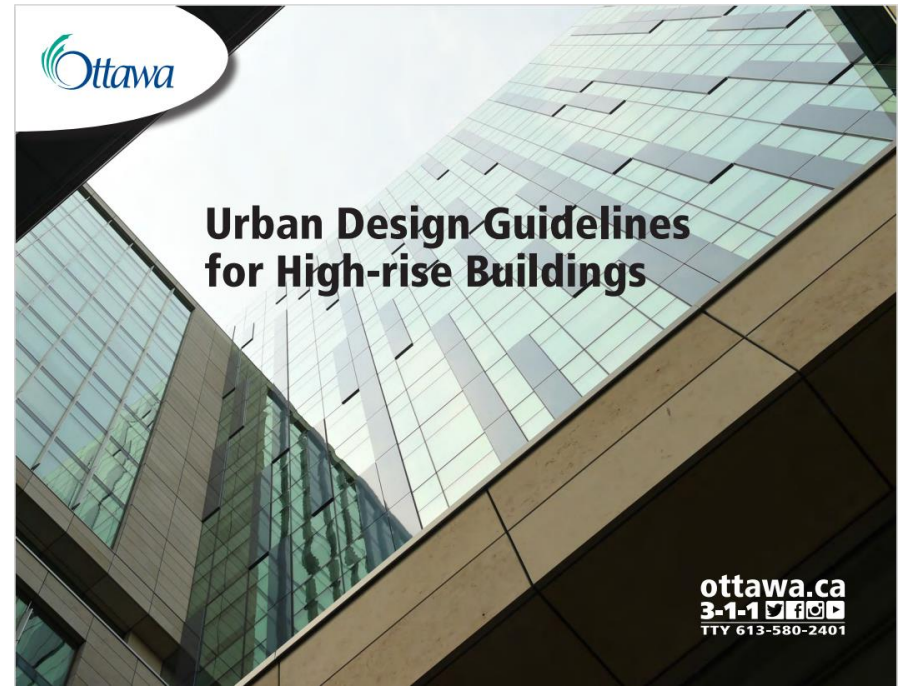
SIX OVER-ARCHING GOALS

- Compact urban form
- High-quality urban design
- Mixture of land uses
- Diverse and accessible greenspace
- Efficient transportation system
- Anticipation of growth

Appendix 2 – Population and Density Projections

Options	Projected Retail Floor Area (m^2)	Projected Office Floor Area (m^2)	Projected Dwelling Units	Projected Population	Projected Employment	People & Jobs/Gross Hectare
Option 1	200,000	0	8,008	15,616	4,444	125
Option 2	217,000	110,000	8,008	15,616	10,322	161
Option 3	110,000	205,000	8,008	15,616	12,694	176

POLICY CONTEXT
URBAN DESIGN GUIDELINE FOR HIGH RISE BUILDINGS



These guidelines apply to high-rise buildings between 10 and 30 storeys.

Guidance 1.7 Landmark building - located at a prominent location, such as a major destination, an important public open space, the termination of a vista or view, or a unique natural setting

Guidance 2.1 Built Form - Enhance and create the overall pedestrian experience in the immediate surrounding public spaces (including
POPS) through the design of the lower portion, typically the base, of the building, which:
a. fits into the existing urban fabric, animates existing public spaces, and frames existing views; and
b. creates a new urban fabric, defines and animates new public spaces, and establishes new views.

Guidance 2.24 Tower floor plates - the maximum tower floor plate for a high-rise residential building should be 750 m²

Guidance 2.25 - Provide proper separation distances between towers to minimize shadow and wind impacts, and loss of skyviews, and allow for natural light into interior spaces: a. the minimum separation between towers should be 23 m.

Guidance 3.12 Animation – Providing a safe and appealing pedestrian realm is an Official Plan priority. The pedestrian realm around a high-rise building, including spaces on both public and private lands and the functions and façades of a building that abut the pedestrian realm must be well designed to ensure they are convenient for and attractive to pedestrians and supportive of businesses that are dependent on foot traffic.

SITE & BUILDING DESIGN EVOLUTION

We started our design by examining the neighboring developments first from the development at the north which shows one tower with a large footprint over 16,500 ft² and a 5 storey base and second from the eastern tower development which shows two slimmer towers properly separated.

To respond to the needs of the investment we created first similar concept like the eastern towers which was submitted to planning for review. With the new concept we listened to the comments that were not welcoming repeating the concept of a bulky base.

Instead, we successfully created a base that creates as many open spaces as possible around the base. Unlike the eastern towers and unlike the building on the north, we believe that we created a concept that blends and enriches the public realm.

The centre of the base has been drawn back reducing the overall footprint, providing a generous size courtyard along Marketplace and creating more POPS area within the site.

PREVIOUS CONCEPTS

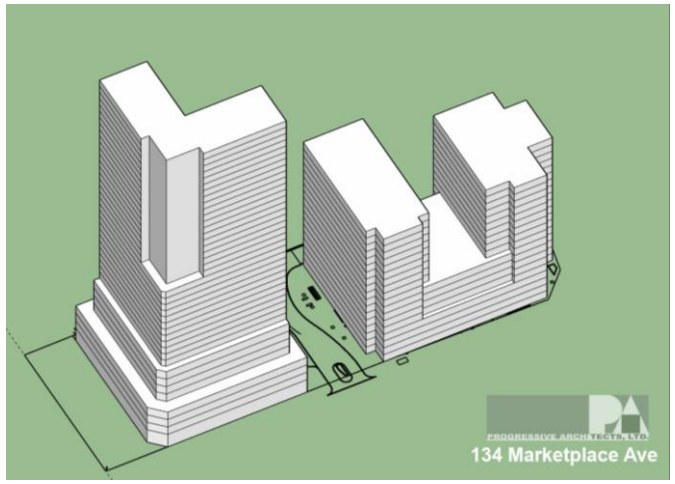
SOUTHWEST PERSPECTIVE

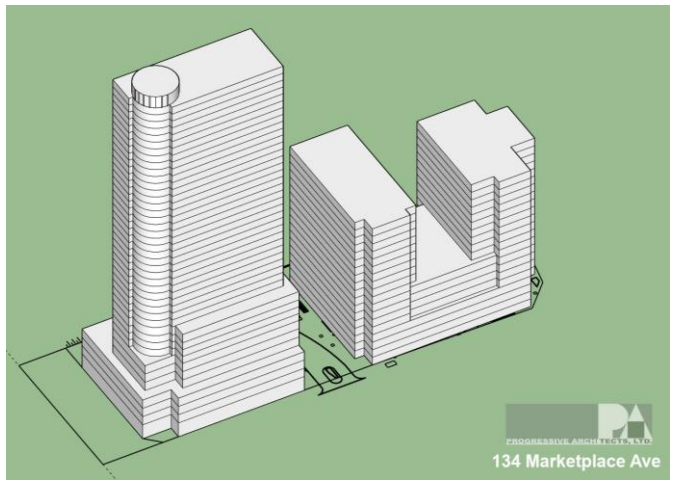
CURRENT CONCEPT

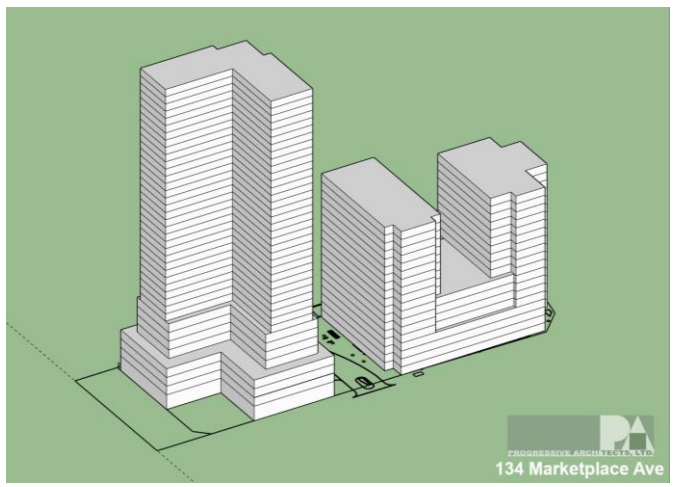
SOUTHWEST PERSPECTIVE

SITE & BUILDING DESIGN EVOLUTION

MASSING STUDY







CURRENT CONCEPT

DEVELOPMENT STATISTICS

TOTAL BUILDABLE AREA
ABOVE GRADE: 60,000m²

TOTAL NO. OF UNITS: 619

PODIUM LEVELS (7 LEVELS)
GFA (2ND-4TH): 1,880m² (PER FLR)
GFA (5th -8TH): 1,682m² (PER FLR)

WEST TOWER (29 LEVELS)
GFA (9TH-40TH): 630m² (PER FLR)

EAST TOWER (19 LEVELS)
GFA (9TH-30TH): 650m² (PER FLR)

PARKING LEVELS (6 LEVELS)
BELOW GRADE: 26,000m²

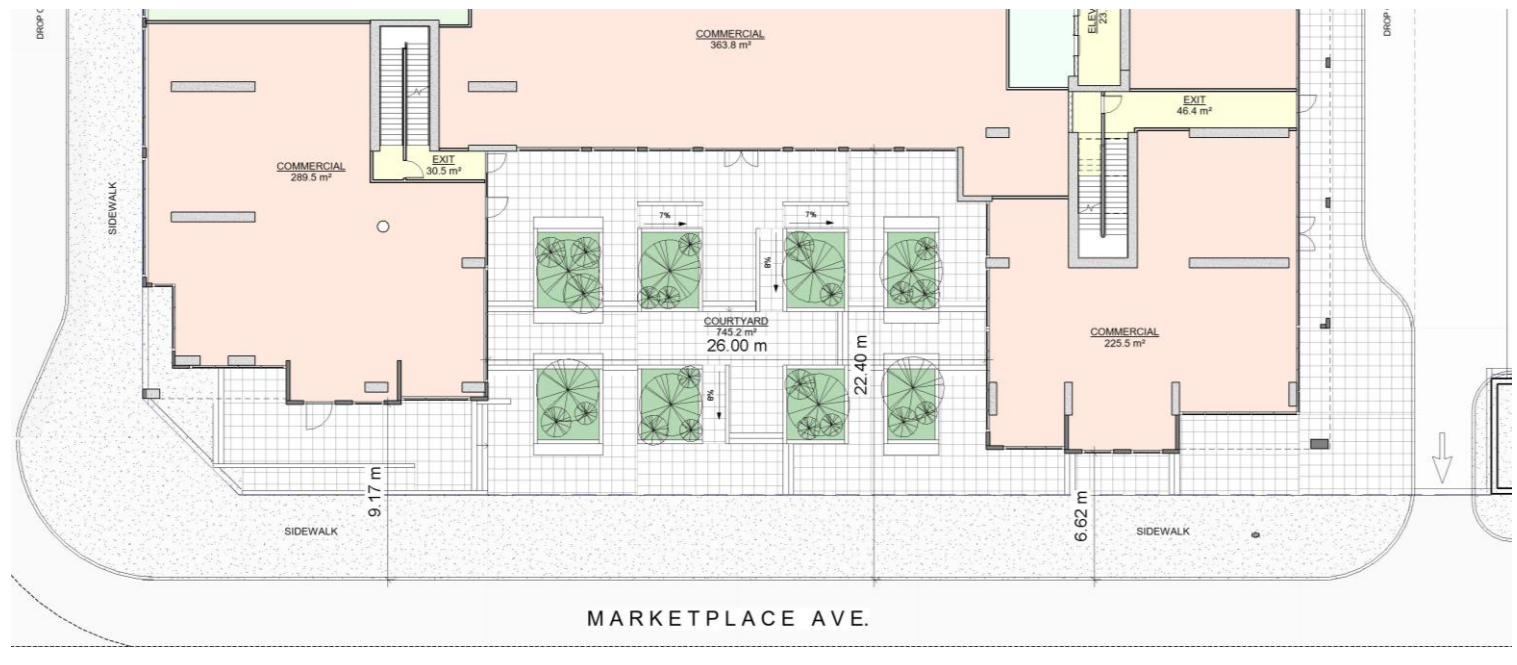
TOTAL NO. OF PARKING SPACES: +700

SITE OVERVIEW

- The project lot is a regular shaped corner lot of 4148 m² which is more than 3 times larger than the minimum for a high rise building according to the high-rise design guidelines.
- Access to the underground car parking and services is provided at the North(back) of the building connected through a private drive to Marketplace Ave. The intent is to hide or screen all loading and building services.

PRIVATELY OWNED PUBLIC SPACE

- The design offers two generous size courtyards. The front one, which is the largest, is open to Marketplace Ave. The front courtyard will provide Privately Owned Public Space of about 580 m² including the sidewalk.
- Both sides of the front courtyard will be set back from the street creating a total public use area of 750 m².
- The area surrounding the front courtyard is intended to be shops, restaurants and other public use spaces.



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URBAN COURTYARD INTENT
(SAMPLE PROJECTS)

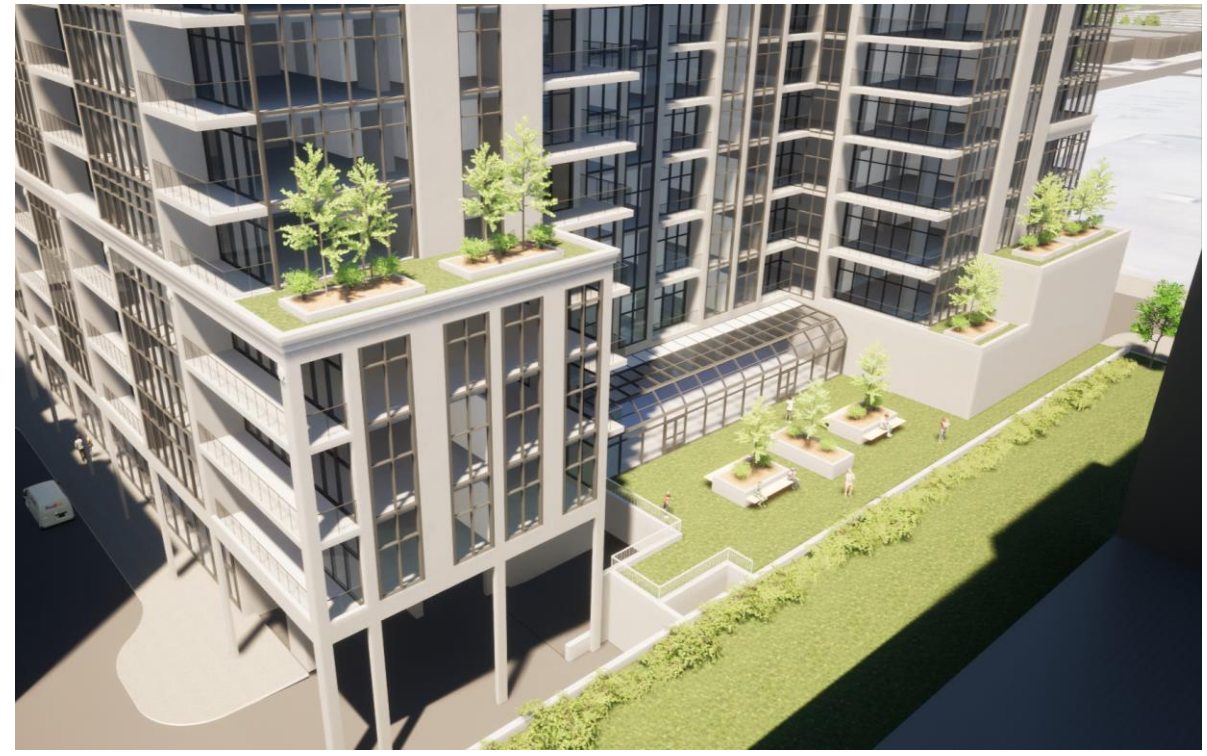
- Create an urban park space with seating and planters.
- Visual interest with stepped levels and interspersed planter beds.
- Create “private” gathering spaces within the courtyard.
- Lending exterior space to be utilized by the surrounding business for exterior seating.

RESIDENT COURTYARD
(IMAGES TO RIGHT)

- At the back we are proposing an additional courtyard intended for the building occupants.
- It is approximately 290m² with a footpath link to McGarry Terrace extension. It is also connected to the ground floor amenities.
- Total first floor open space is about 25% of the lot area.

AMENITY TERRACE
(IMAGE BELOW)

- The intent as well is to create an amenity terrace on the 9th floor for the residents.
- This will overlook both the public courtyard along Marketplace as well as the courtyard to the North.



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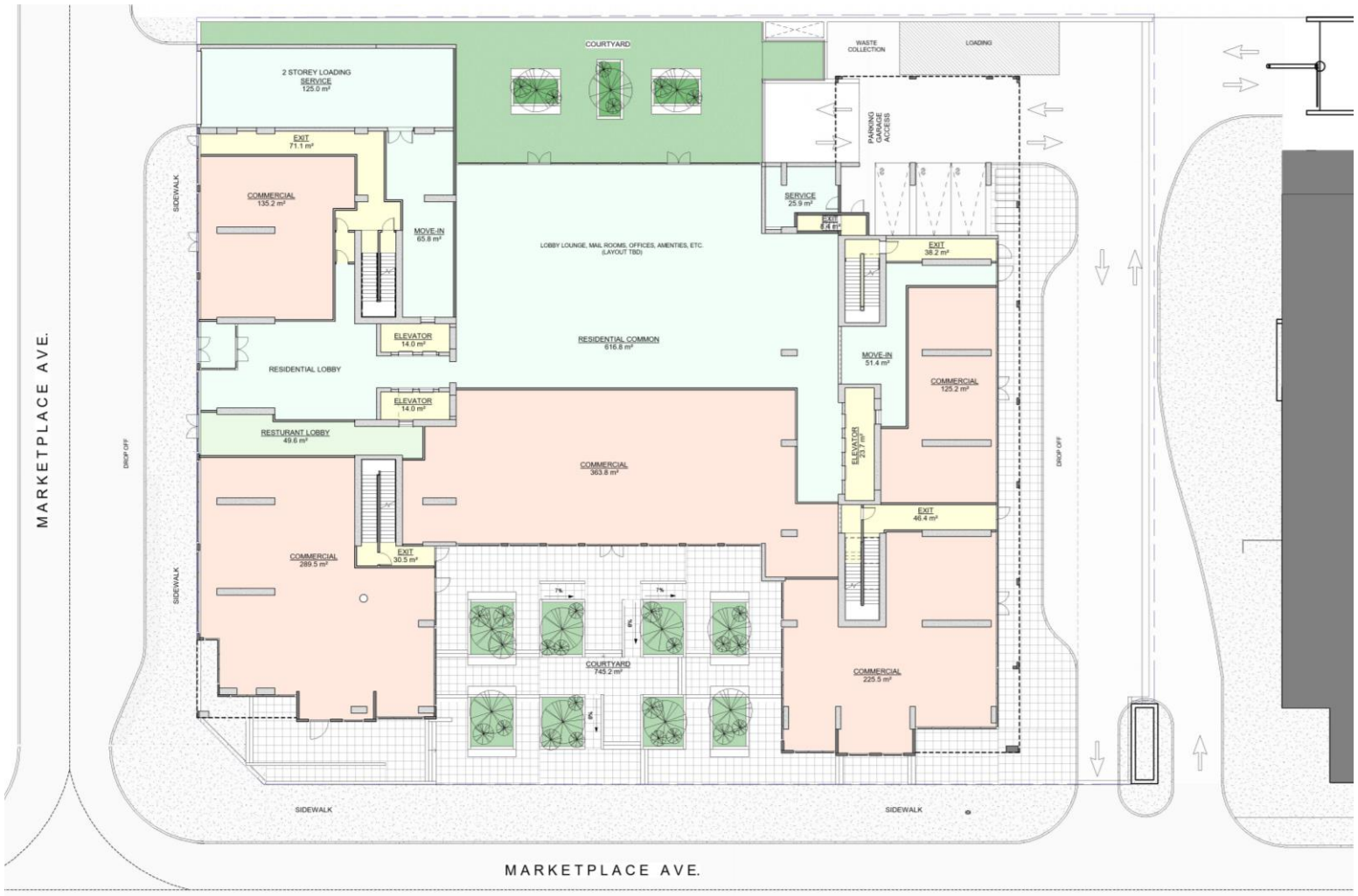
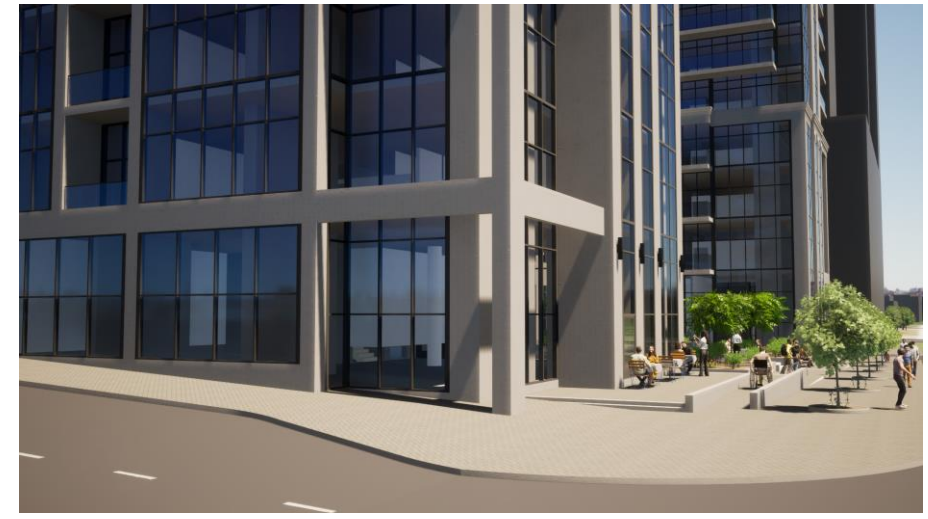
FIRST FLOOR

The principal entrance of the building is proposed along the West at McGarry Terrace Extension which will be linked to the middle lounge area and through which the link continues to the east side elevators.

The East face will provide a pedestrian arcade intended to create a strong pedestrian/commercial connection.





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RESIDENTIAL DESIGN CONSIDERATIONS

- The proposed building consists of eight levels of base podium and two towers.
- The podium is intended to have a shape that invites the public into the site and allows a strong connection between the interior and exterior spaces.
- The two towers are designed with small footprint. Each around 800m² with a separation distance of 23m between the two.
- The concept behind the two towers is to achieve the largest building perimeter which in return will provide plenty of exterior wall exposure and sunshine to the units.
- The target of the design is to house around 619 residential units of different sizes including affordable rental units.
- The façade treatment of the podium base will be mainly of masonry cladding. The tower facades will be predominantly glass and metal panels to provide the feeling of light massing.
- Residential units will be provided with balconies that is to be surrounded with glass guardrails covering the balcony slab edges similar to the eastern development.

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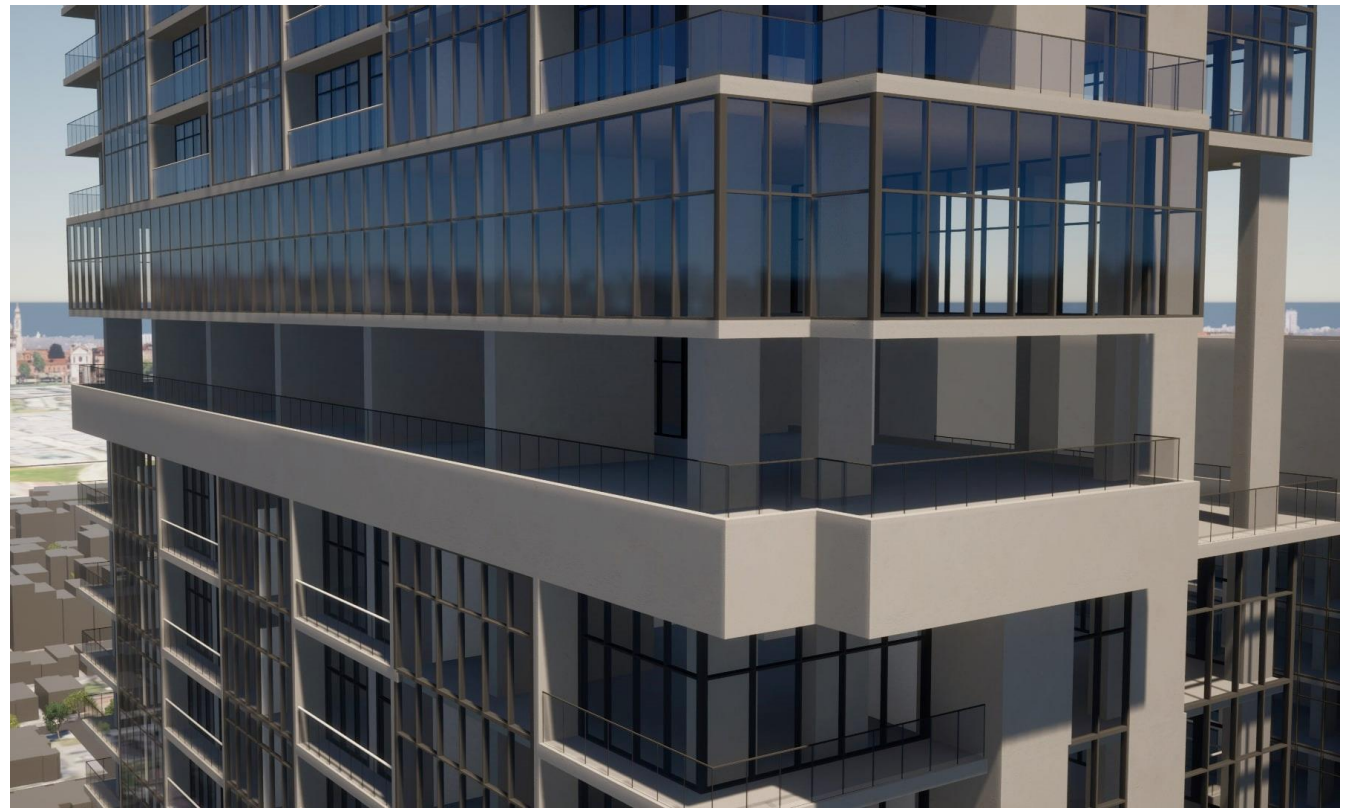
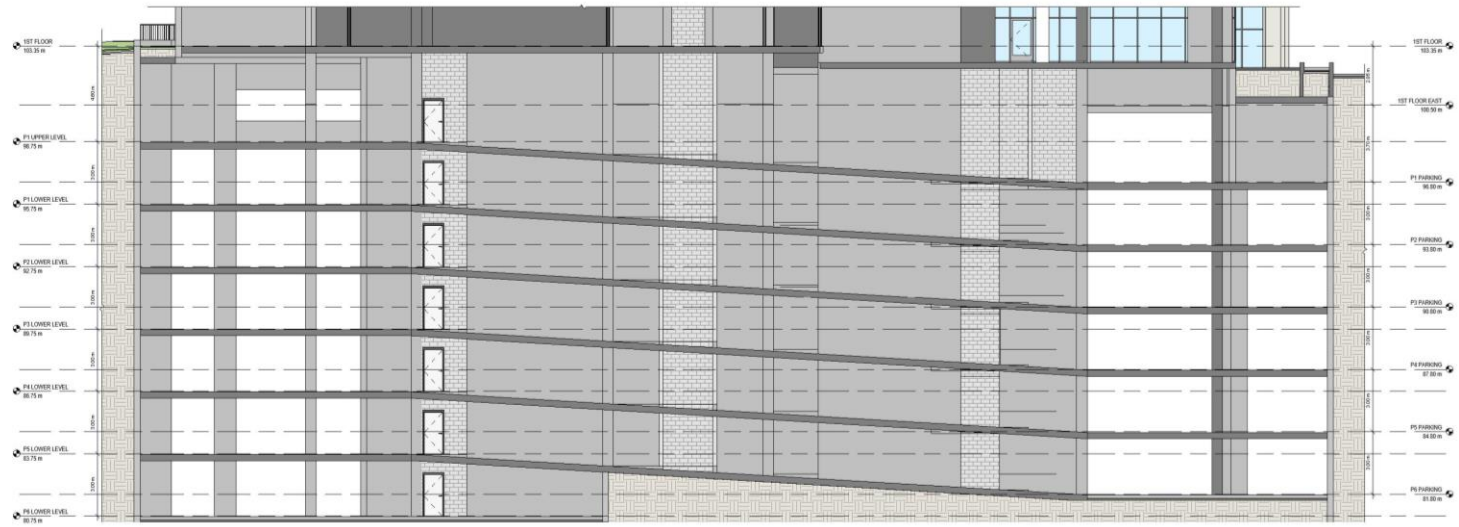
AMENITY LEVELS

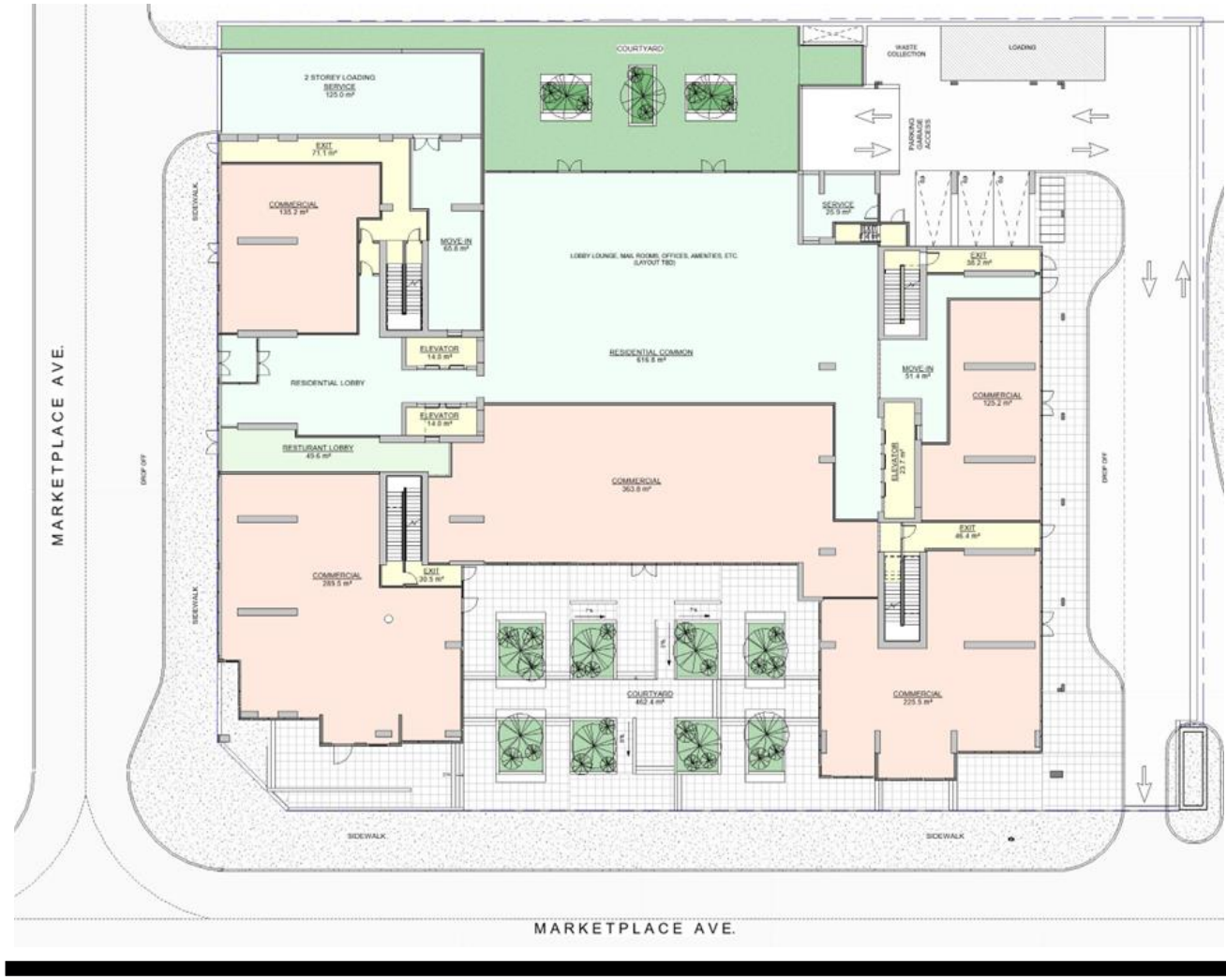
- We are proposing to have the 32nd and 33rd floors of the western tower for a public restaurant, viewing platform and amenities. As well as dedicating the 20th and the 21st floors at the eastern tower for amenities.
- The intent is to include a pool, party room and further associated amenities. The massing of the amenity floors will be designed with different and larger scale shapes to break down the redundance of the tower floor shapes.

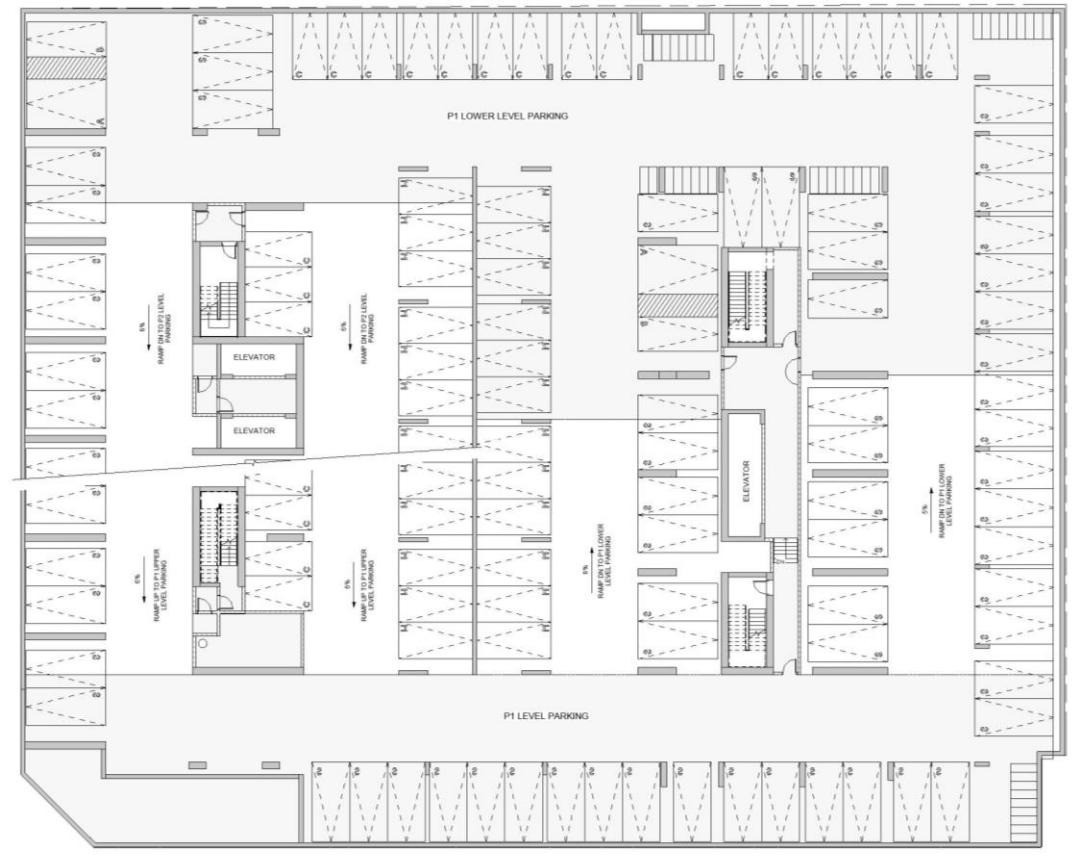


PARKING LEVELS

- The proposal is to have a six-storey underground parking garage that will accommodate more than 700 parking spaces.
- The parking garage will be accessible from the northeast corner of the lot.
- Aside from parking spaces it will also facilitate the building services such as garbage collection and service rooms inside the underground parking area.







TYPICAL PARKING LEVEL

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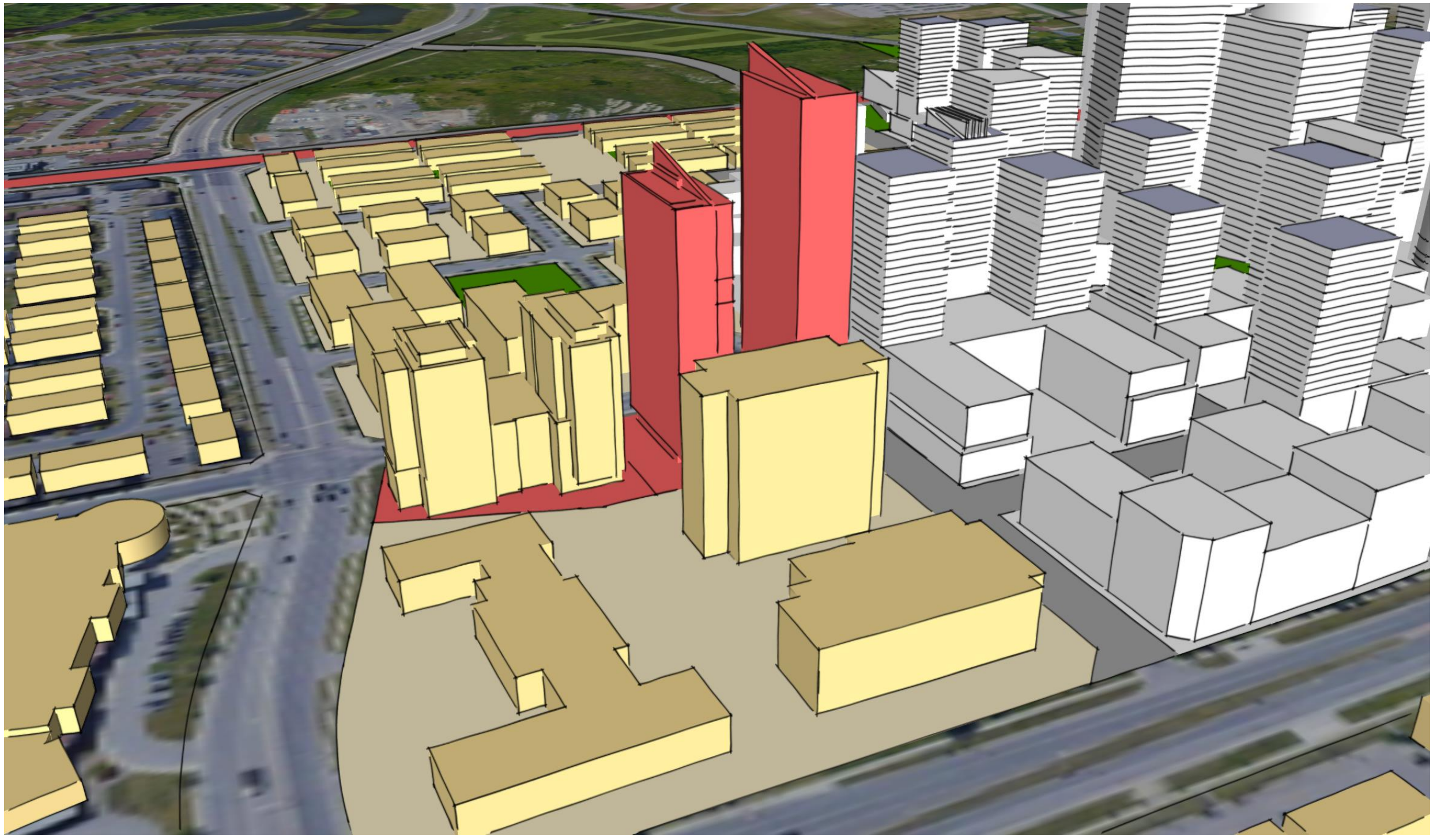

Saad Khalaf, OAA, NCARB, PMP
President

Progressive Architects has assumed all information received from Kionas Construction Inc. and third parties in the preparation of the Report to be correct. Progressive Architects has exercised a customary level of judgment or due diligence in the use of such information, Progressive Architects assumes no responsibility for the consequences of any error or omission contained therein.

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