

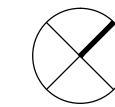
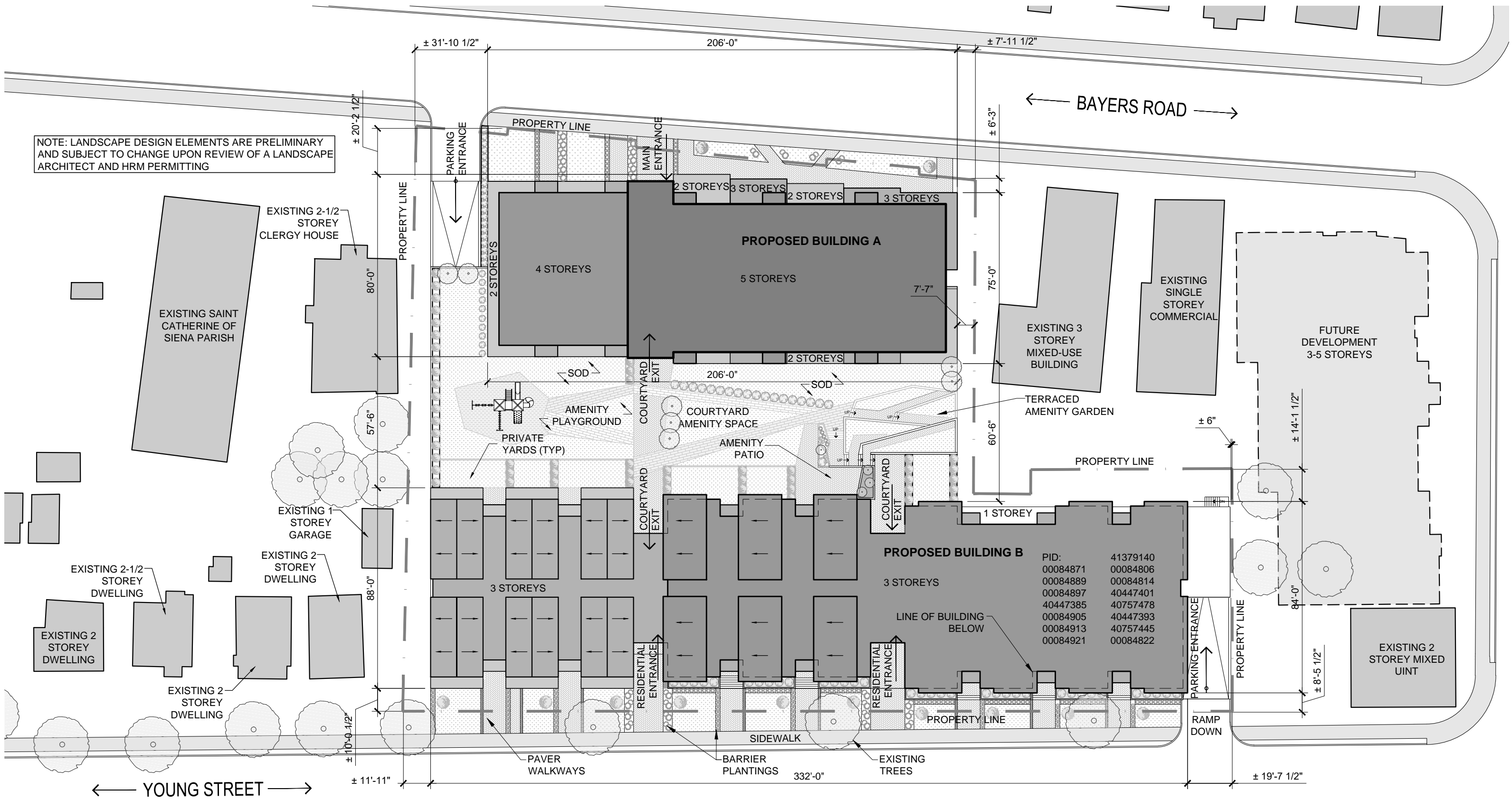








NOTE: LANDSCAPE DESIGN ELEMENTS ARE PRELIMINARY AND SUBJECT TO CHANGE UPON REVIEW OF A LANDSCAPE ARCHITECT AND HRM PERMITTING

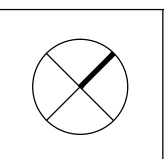


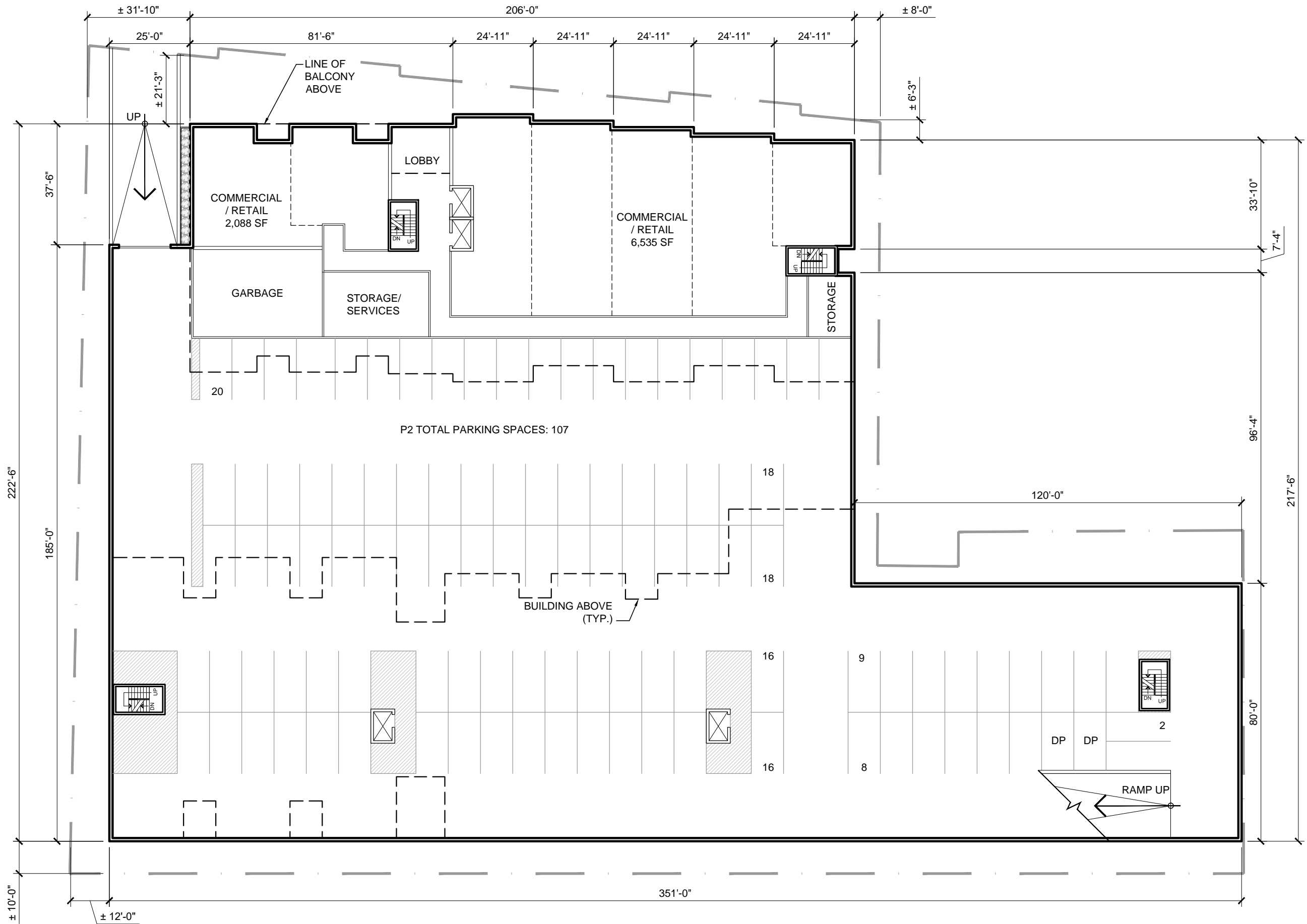
BAYERS & YOUNG (18 MAY 2016)

LEVEL	STUDIO		1 BR		1 BR + DEN		2 BR +		TOTAL		
	BLDG A	BLDG B	BLDG A	BLDG B	BLDG A	BLDG B	BLDG A	BLDG B	BLDG A	BLDG B	COMBINED
100 / P1	1	-	1	3	2	1	4	4	8	8	16
200	2	-	8	6	3	1	2	12	15	19	34
300	4	-	3	4	4	1	2	14	13	19	32
400	1	-	1	4	4	1	5	8	11	13	24
500	1	-	-	-	1	-	5	-	7	-	7
	9 (17%)	0 (0%)	13 (24%)	17 (29%)	14 (26%)	4 (7%)	18 (33%)	38 (64%)	54	59	
TOTALS:	9 (8%)		30 (26%)		18 (16%)		56 (50%)				113

DENSITY			
1 BR UNITS	57 X 2 ppl		114
2 BR	56 X 2.25 ppl		126
	TOTAL		240

PROPERTY AREA	72,746 SF
LOT COVERAGE	42,664 SF (58%)
INDOOR AMENITY SPACE AREA (LEVEL 100 / P1):	± 1,017
GROUND FLOOR COMMERCIAL RETAIL AREA (P2):	± 8,623
MEZZANINE LEVEL COMMERCIAL RETAIL AREA (LEVEL 100/P1):	± 827
TOTAL COMMERCIAL / RETAIL AREA:	± 9,450
OUTDOOR AMENITY SPACE AREA (LEVEL 100 COURTYARD):	± 12,039
LANDSCAPE OPEN SPACE AT GRADE:	± 18,043
TOTAL LANDSCAPED OPEN SPACE:	± 30,082
P2 BELOW GRADE PARKING	± 107
P1 BELOW GRADE PARKING	± 20
TOTAL BELOW GRADE PARKING	± 127



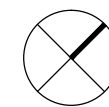


BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

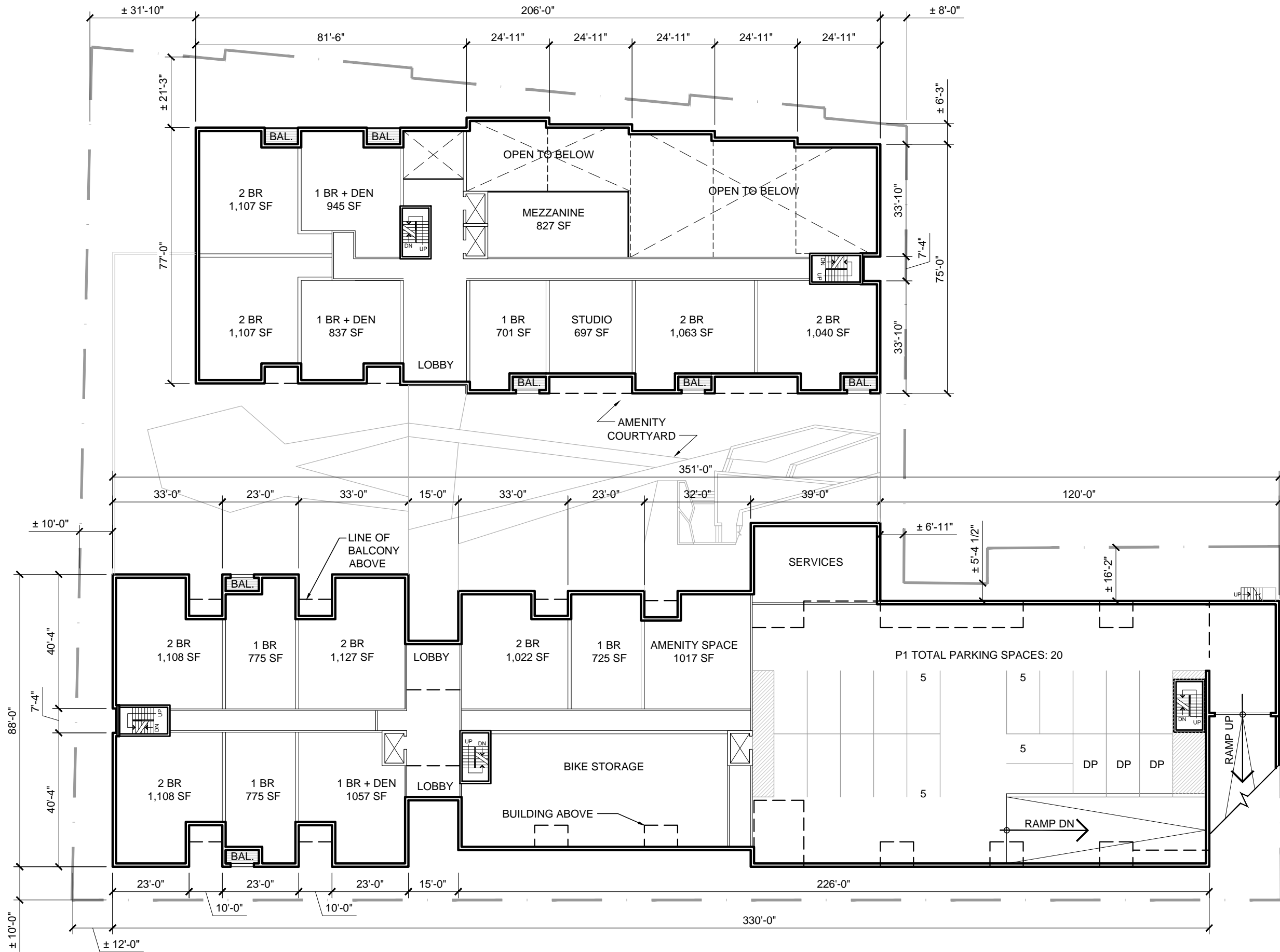
PARKING LEVEL 2
FLOOR PLAN

Project No.: 2012.13
Scale: 1" = 30'-0"
Date: 3 JUNE 2016



WM FARES
ARCHITECTS

A01

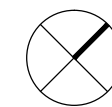


BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

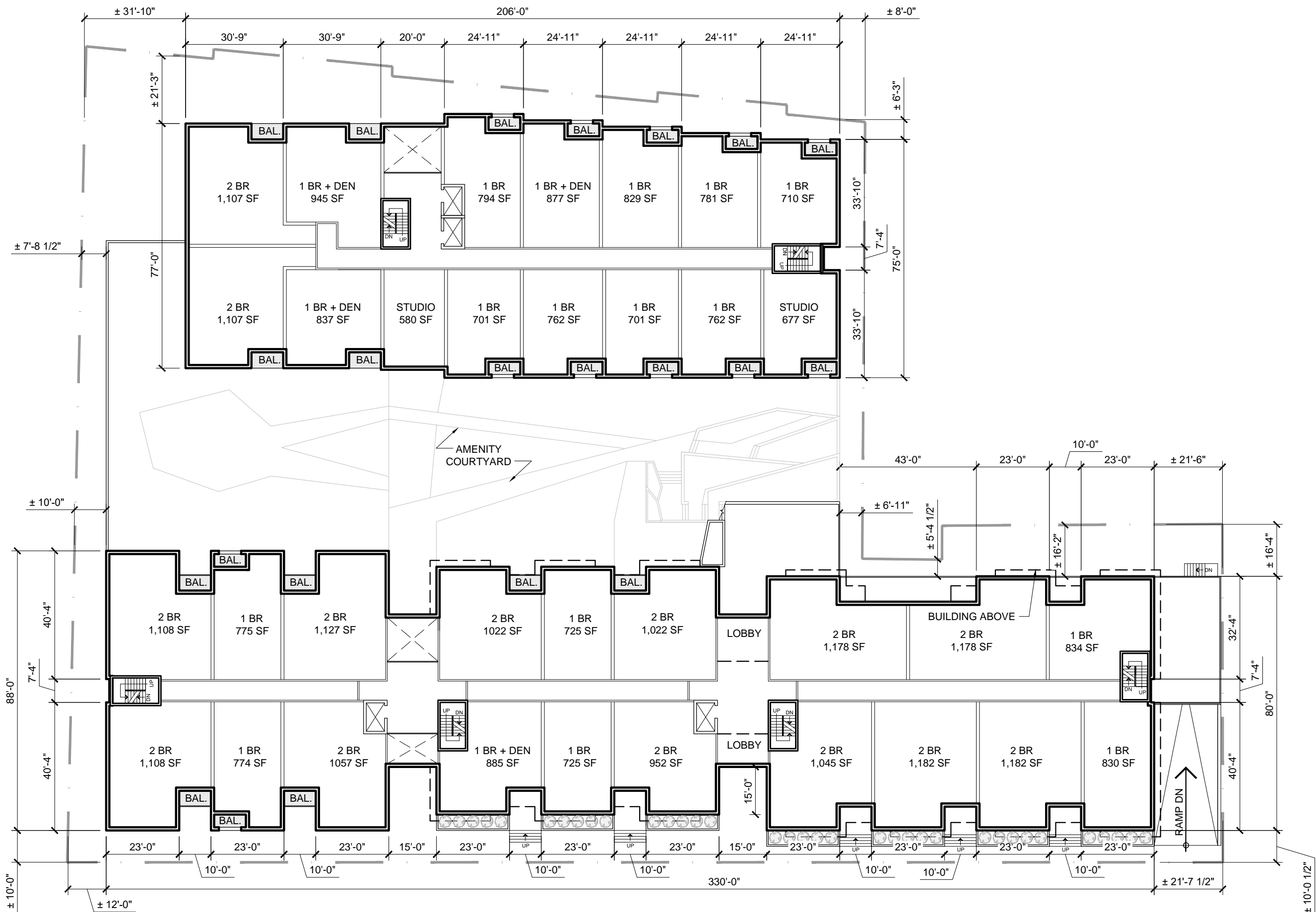
GROUND LEVEL / PARKING LEVEL 1
FLOOR PLANS

Project No.: 2012.13
 Scale: 1" = 30'-0"
 Date: 3 JUNE 2016



WM FARES
 ARCHITECTS

A02

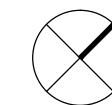


BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

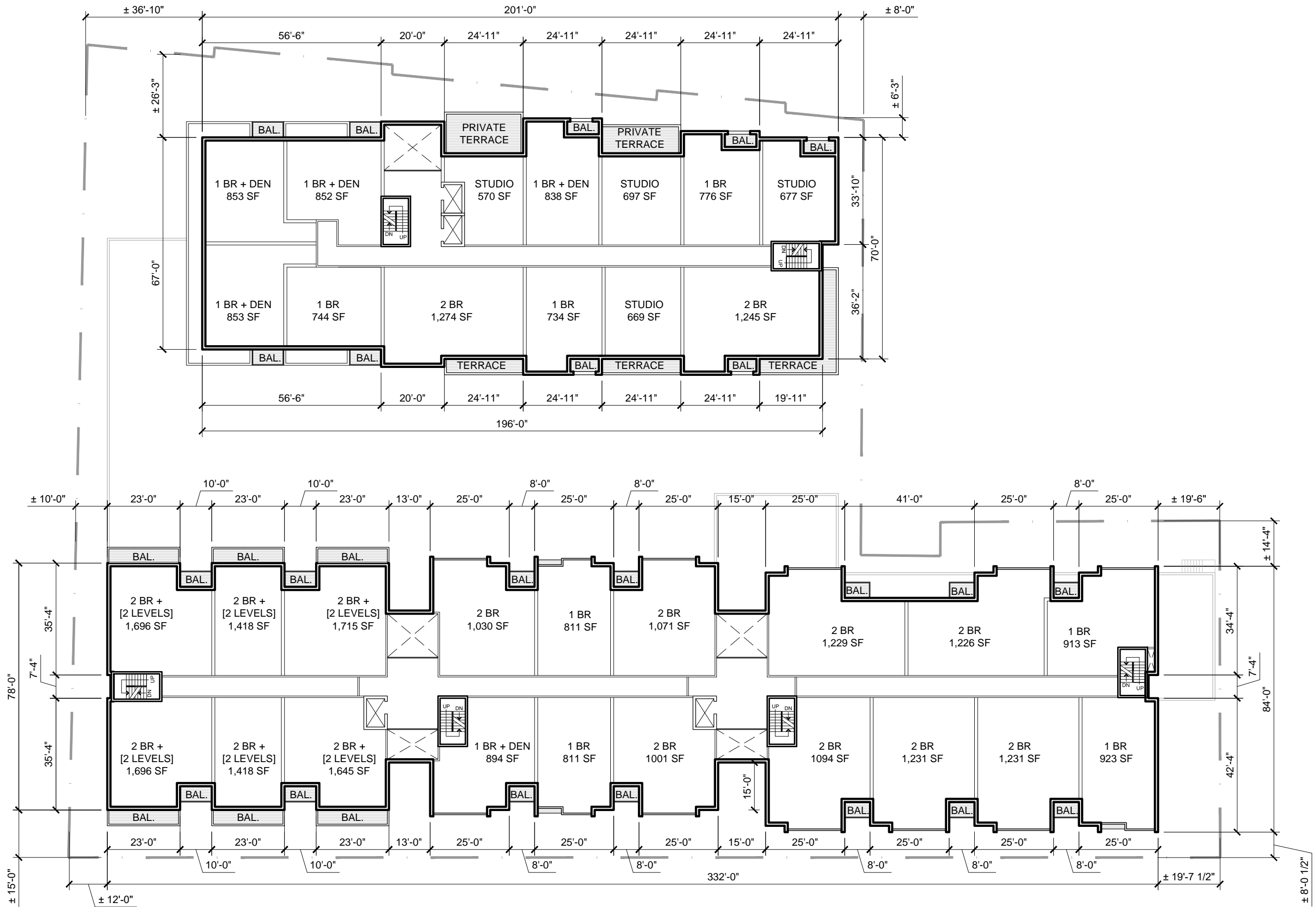
LEVEL 200
FLOOR PLANS

Project No.: 2012.13
Scale: 1" = 30'-0"
Date: 3 JUNE 2016



WM FARES
ARCHITECTS

A03

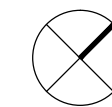


BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

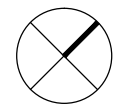
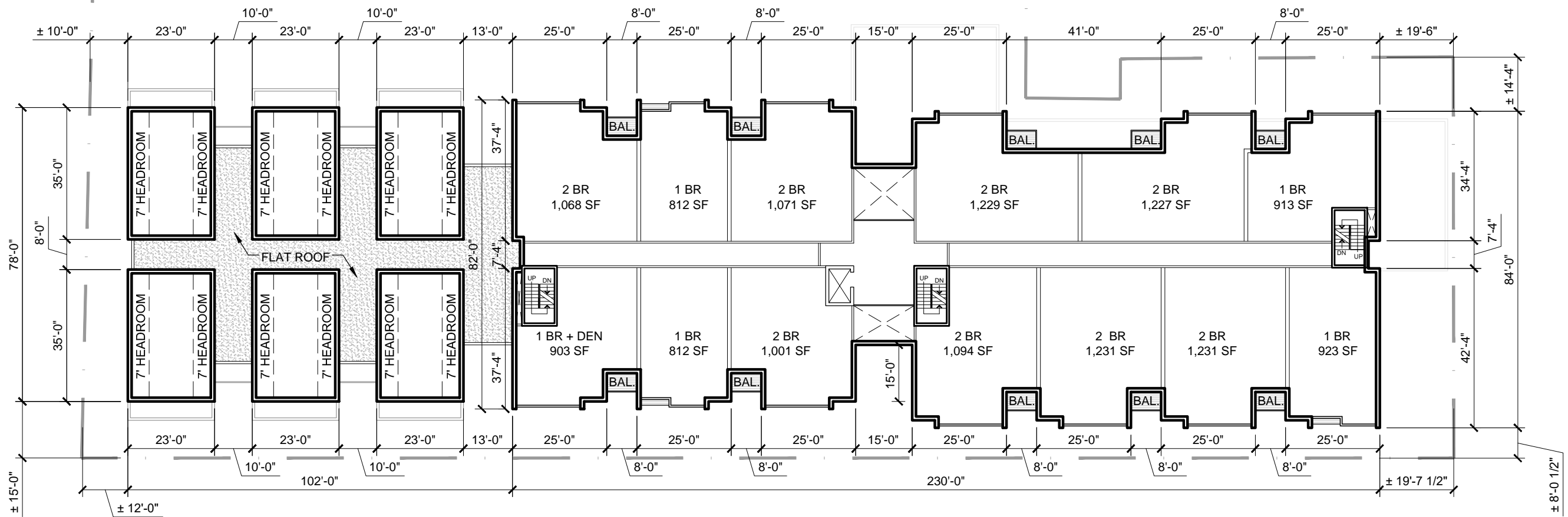
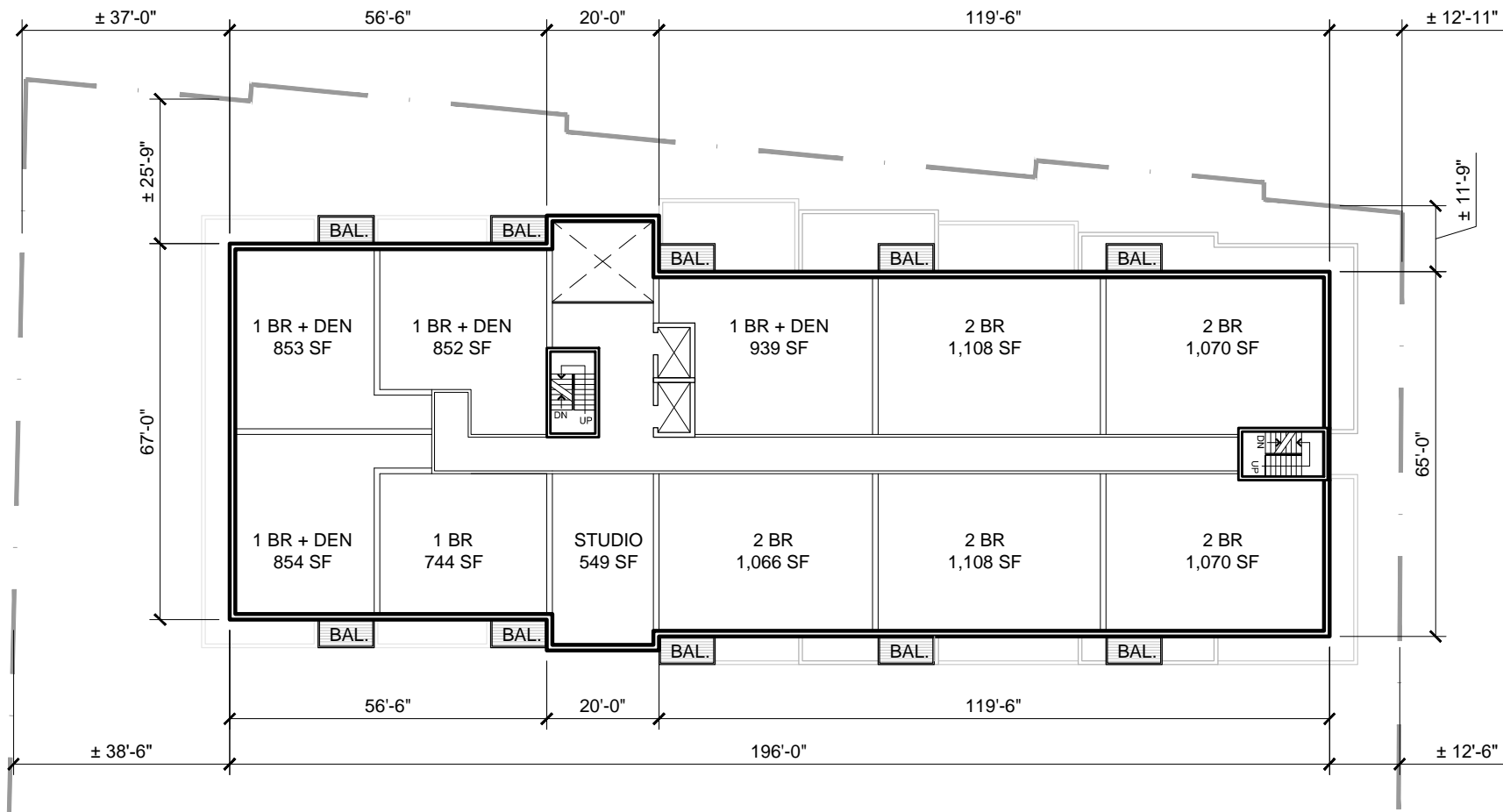
LEVEL 300
FLOOR PLANS

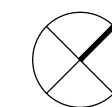
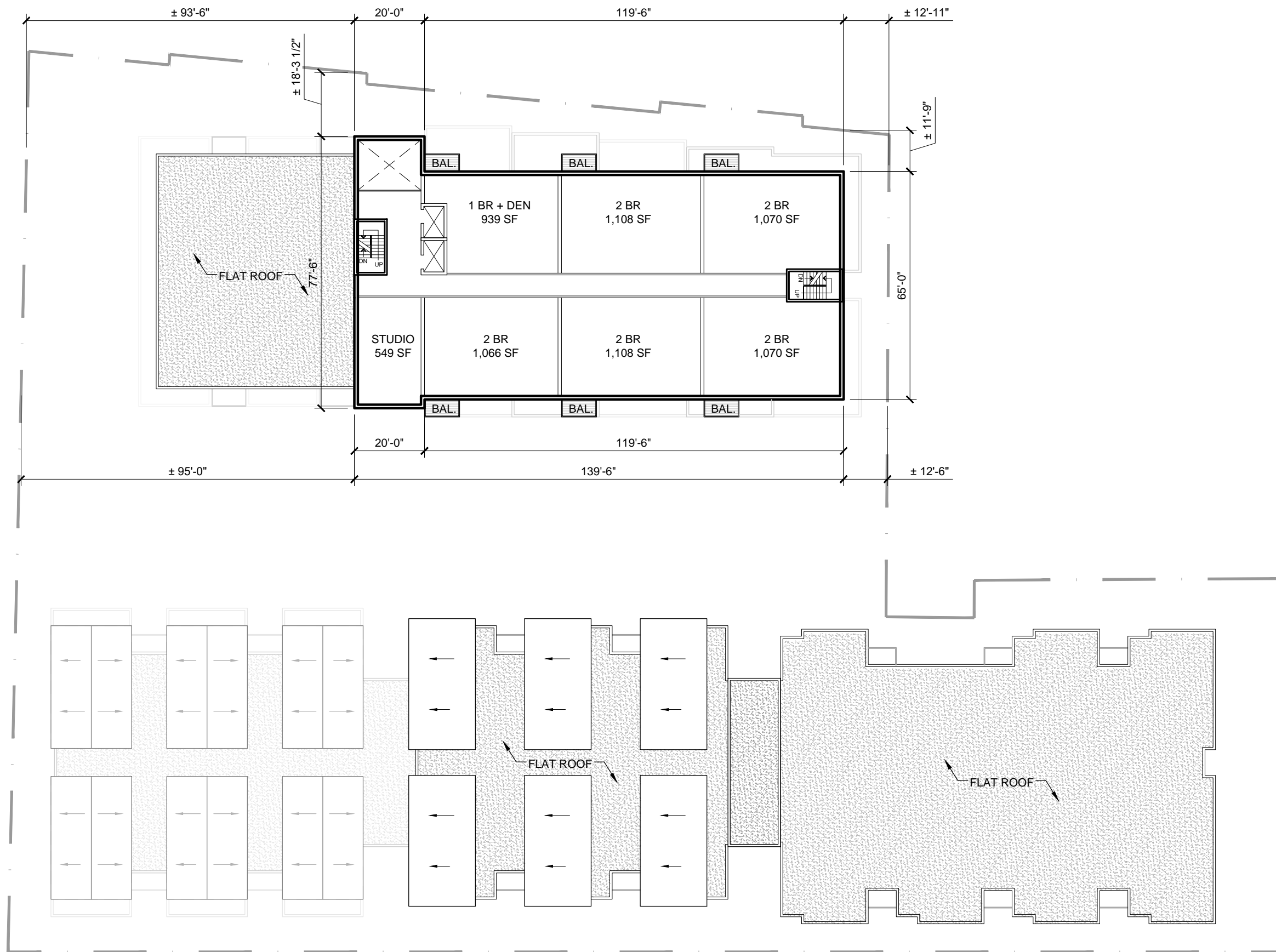
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Scale: 1" = 30'-0"
Date: 3 JUNE 2016

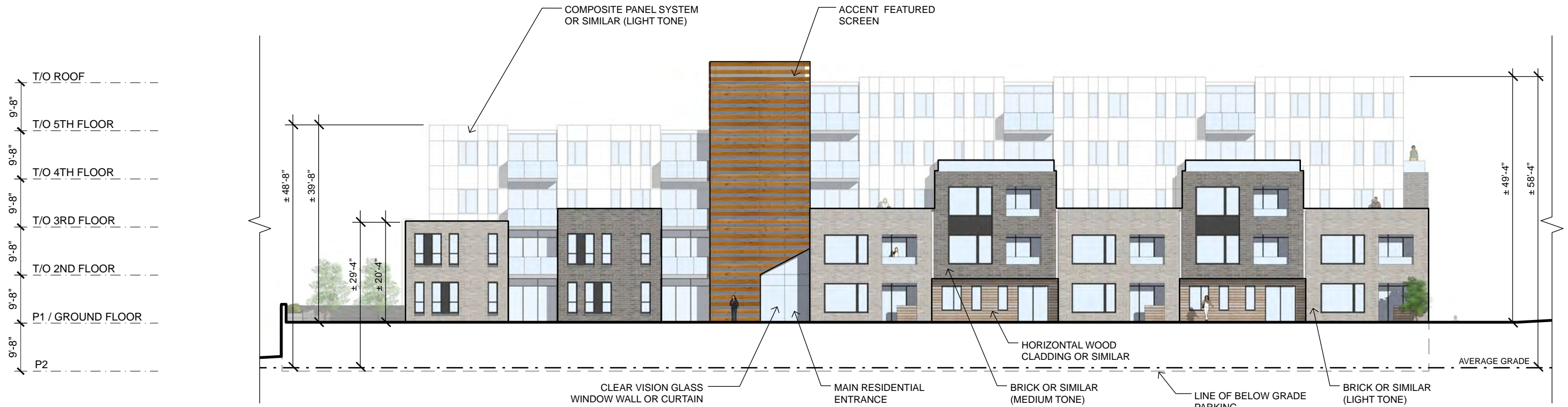


WM FARES
ARCHITECTS

A04



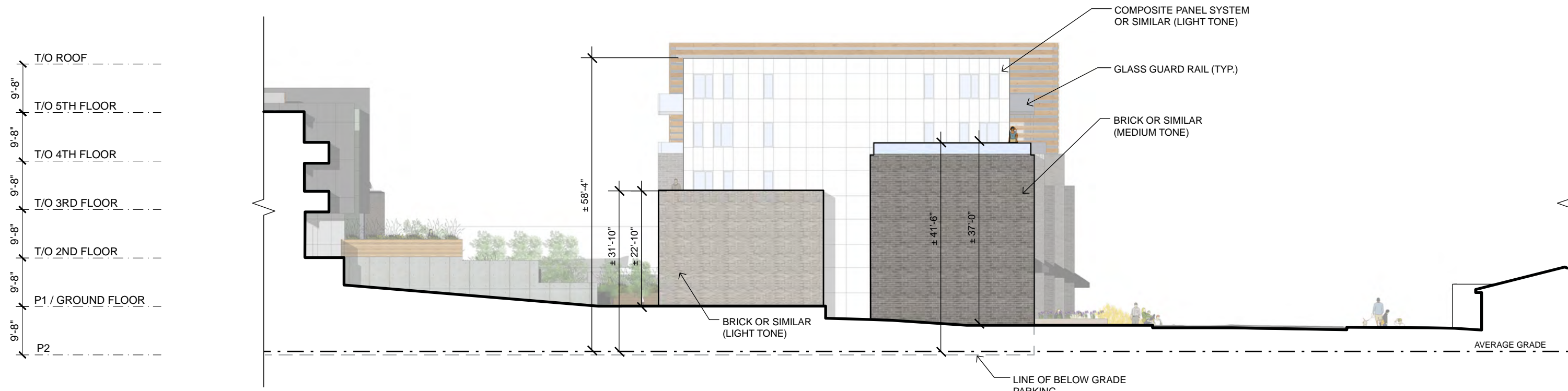




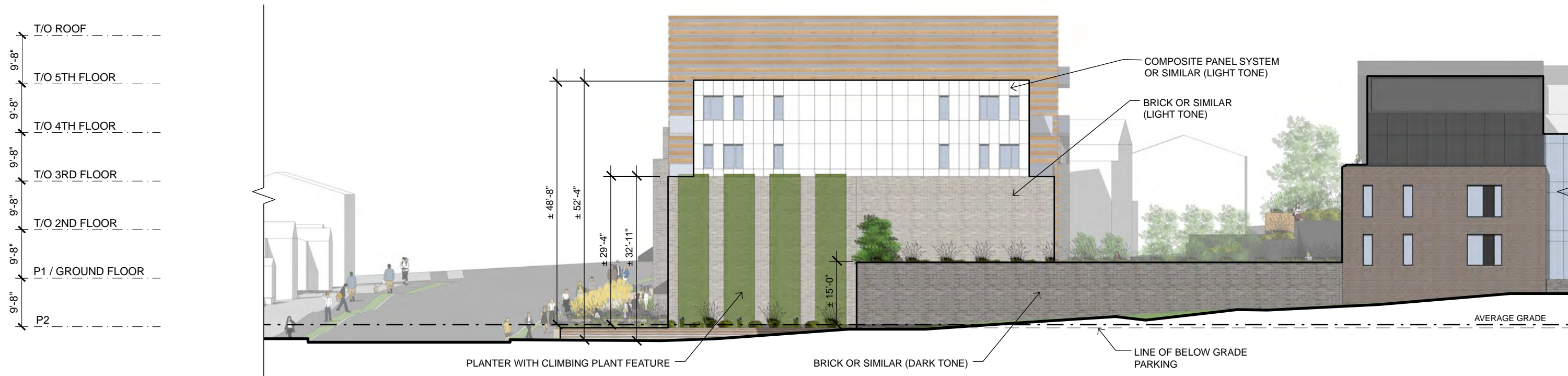
1 BUILDING A - EAST ELEVATION
SCALE: 1" = 20'-0"



2 BUILDING A - WEST ELEVATION
SCALE: 1" = 20'-0"



1 BUILDING A - NORTH ELEVATION
SCALE: 1" = 20'-0"



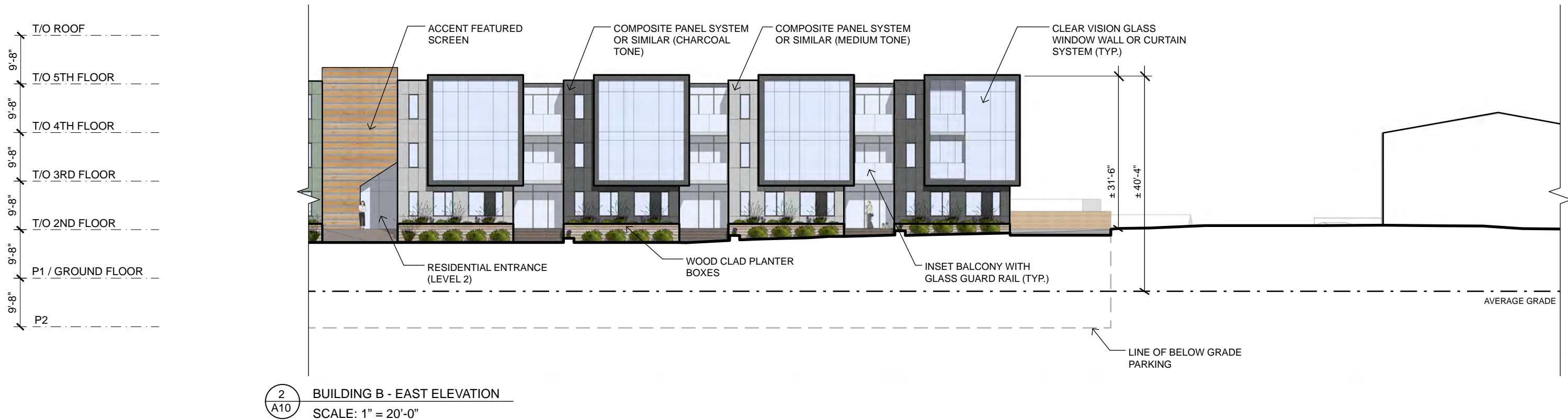
2 BUILDING A - SOUTH ELEVATION
SCALE: 1" = 20'-0"

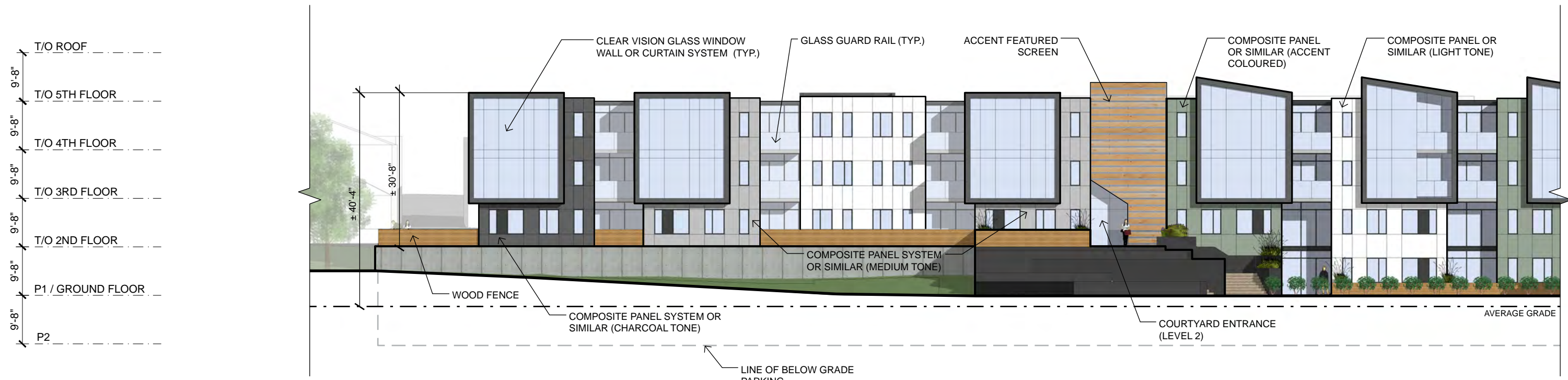


1 BUILDING B - EAST STREETScape ELEVATION
 A09 SCALE: 1" = 30'-0"

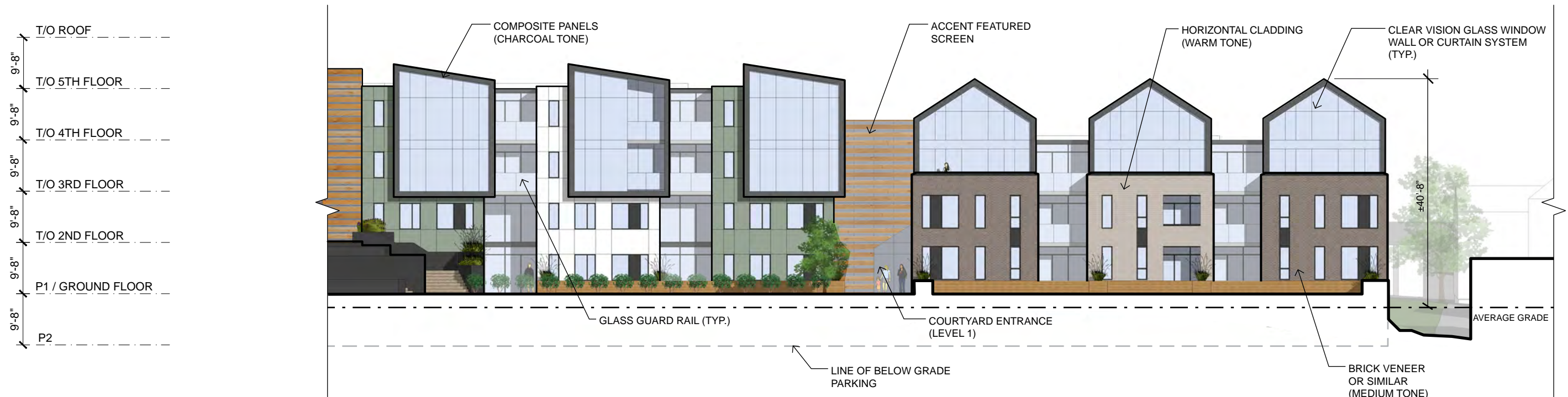


2 BUILDING B - WEST COURTYARD ELEVATION
 A09 SCALE: 1" = 30'-0"

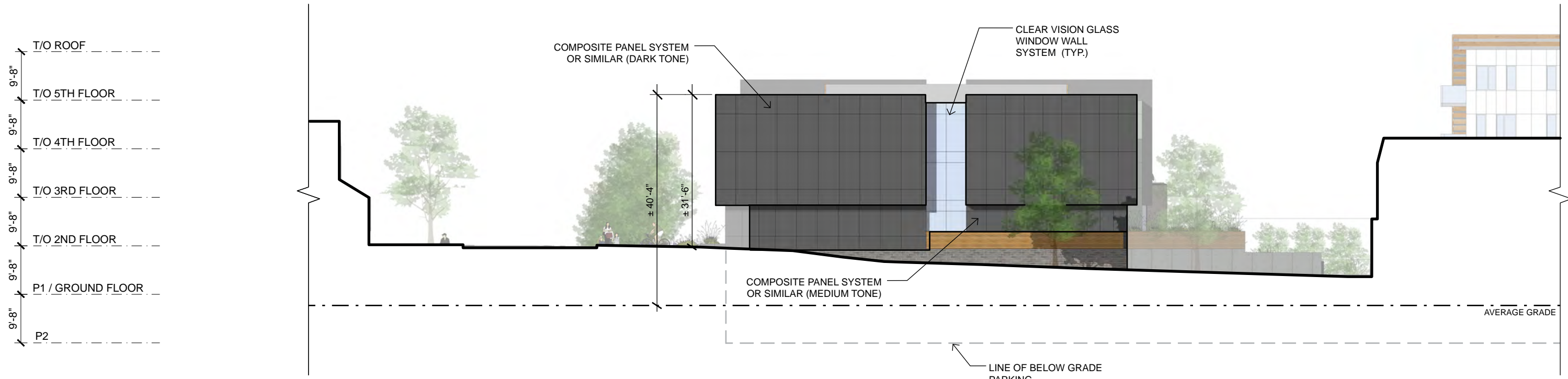




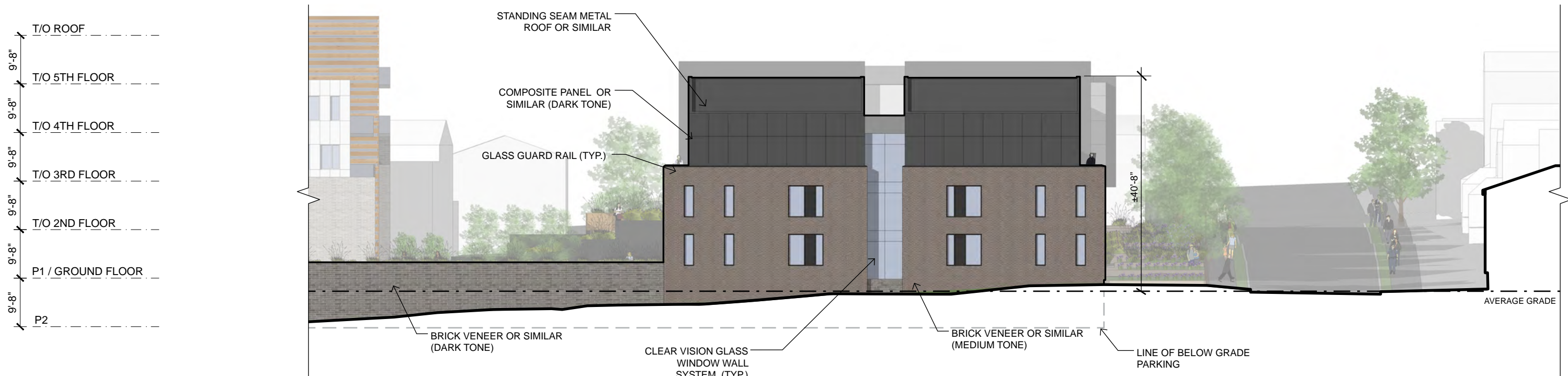
1 BUILDING B - WEST ELEVATION
 A11 SCALE: 1" = 20'-0"



2 BUILDING B - EAST ELEVATION
 A11 SCALE: 1" = 20'-0"



1 BUILDING B - NORTH ELEVATION
SCALE: 1" = 20'-0"



2 BUILDING B - SOUTH ELEVATION
SCALE: 1" = 20'-0"



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING B

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK1



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING B

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK2



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING B

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK3



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING B

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK4



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING A

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK5



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING A

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK6



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
BUILDING A

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK7



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
COURTYARD

Project No.: 2012.13
Scale: NTS
Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK8



BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

PERSPECTIVE VIEW
COURTYARD

Project No.: 2012.13

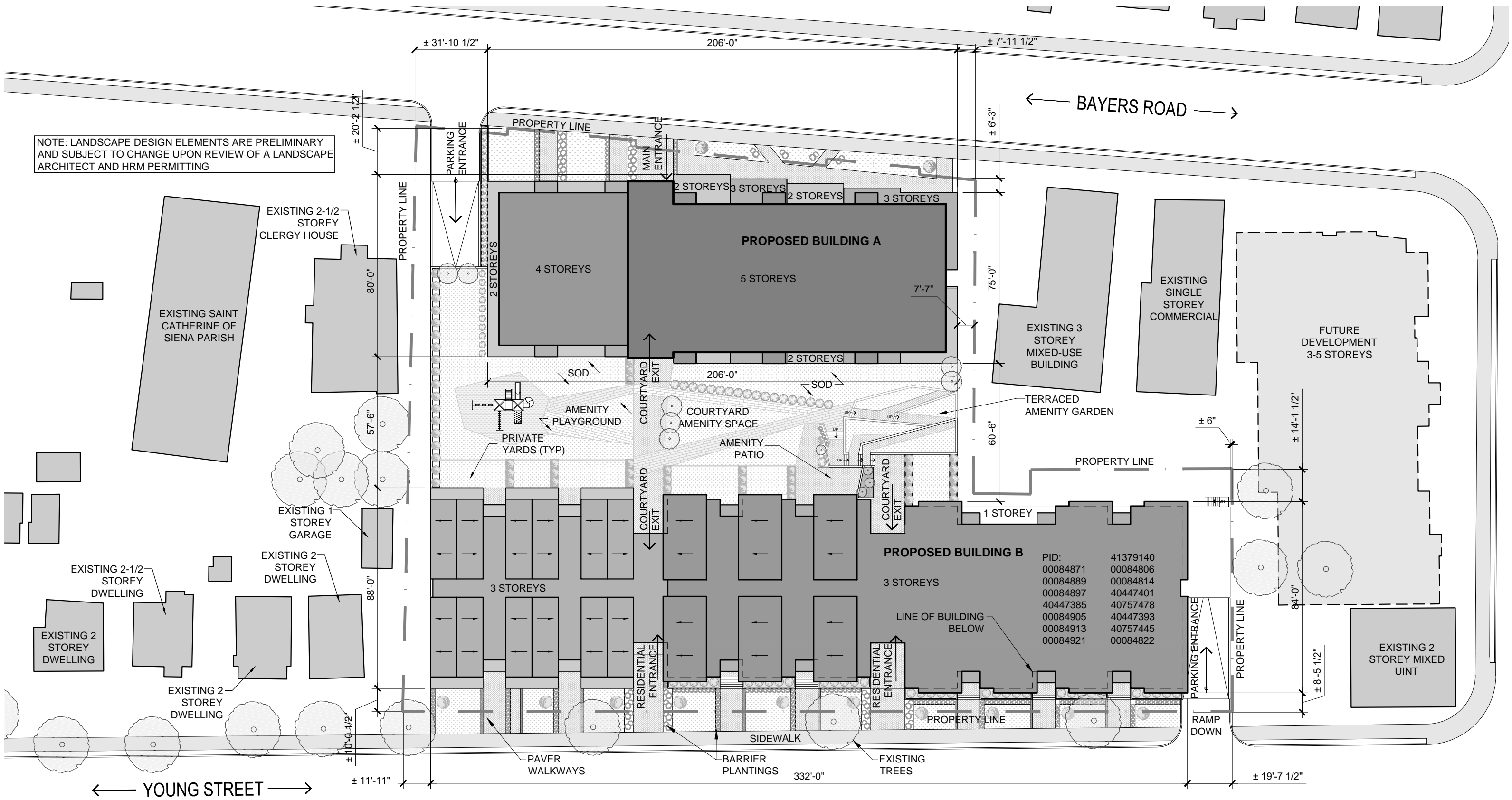
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Date: 3 JUNE 2016

WMFARES
ARCHITECTS

SK9

NOTE: LANDSCAPE DESIGN ELEMENTS ARE PRELIMINARY AND SUBJECT TO CHANGE UPON REVIEW OF A LANDSCAPE ARCHITECT AND HRM PERMITTING

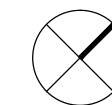


BAYERS AND YOUNG

6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

SITE / LANDSCAPE PLAN

Project No.: 2012.13
 Scale: 1" = 40'-0"
 Date: 3 JUNE 2016



WM FARES ARCHITECTS

SP01



Ref. No. 161-04044 Task 3

May 31, 2016

Ms. Ashley Blissett, P. Eng
Senior Development Engineer
Halifax Regional Municipality
PO Box 1749
HALIFAX NS B3J 3A5

RE: Traffic Impact Statement, Proposed Multi-Tenant Residential Building with Ground Floor Commercial Space, Bayers Road & Young Street between Oxford Street and Connolly Street, Halifax, NS

Dear Ms. Blissett:

WM Fares Group is preparing plans to construct a multi-unit residential building with ground floor commercial space on a site west of Oxford Street that has frontages on both Bayers Road and Young Street (Figure 1). The proposed development will include approximately 113 apartment units, 9,450 square feet of neighbourhood oriented commercial space, and approximately 127 underground parking spaces. The development will be served by a driveways on Bayers Road at the west site boundary and Young Street at the east site boundary (Figure 2). This is the Traffic Impact Statement (TIS) required to accompany the development application.

Description of Development Site - The site bisects the block between Bayers Road and Young Street just west of Oxford Street (Figure 1). The site is now occupied by five buildings on Bayers Road, including two single family dwellings, two apartment buildings (total approximately 12 units), and a commercial building (approximately 4,700 square feet). The Young Street frontage portion of the site is now occupied by nine buildings, including six single family dwellings and three apartment buildings (total eight units).

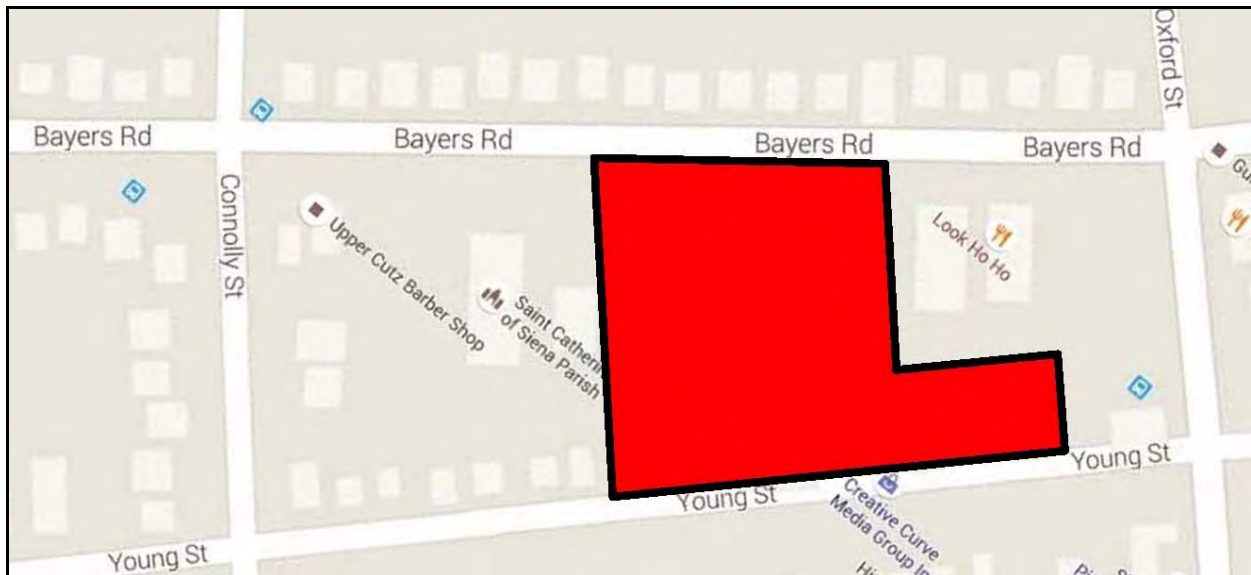
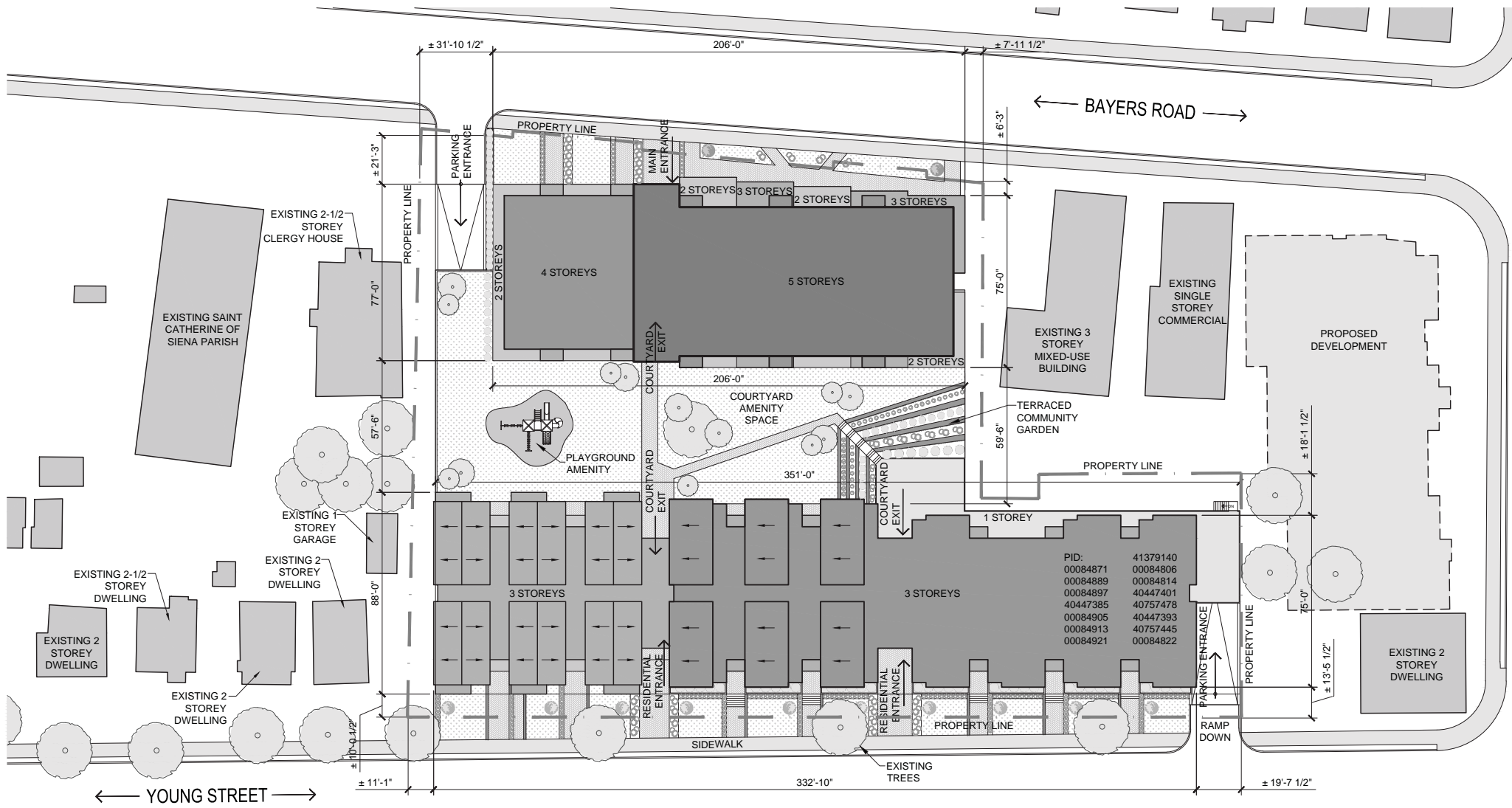


Figure 1 - Proposed development site on Bayers Road and Young Street between Oxford Street and Connolly Street.



PID:	41379140
00084871	00084806
00084889	00084814
00084897	40447401
40447385	40757478
00084905	40447393
00084913	40757445
00084921	00084822

BAYERS AND YOUNG
6438-6460 BAYERS RD AND 6419-6467 YOUNG STREET

SITE PLAN **Figure 1**

Project No.: 2012.13
Scale: 1" = 40'-0"
Date: 15 Apr 2016



WM FARES
ARCHITECTS

SP01

Bayers Road is an east-west arterial street with one eastbound and two westbound travel lanes. The street has curb, gutter, and sidewalks on both sides (Photos 1 and 2). Parking is permitted on both sides of the street adjacent to the site, however, parking and stopping is prohibited on the north side between 4 PM and 6 PM, Monday to Friday.

The street is served by Halifax Transit routes 1, 17, 80, and 81 with bus stops near the site. There is a marked school crosswalk with activated amber flashing beacons at the east side of Connolly Street and pedestrian signals are included at the Bayers Road / Oxford Street intersection east of the site. A traffic count obtained by HRM at the Bayers Road / Oxford Street intersection at the end of October 2014 indicated two-way volumes of 1,110 vehicles per hour (vph) during the AM peak hour and 1,160 vph during the PM peak hour on Bayers Road adjacent to the site.

Visibility is good on both Bayers Road approaches to the parking garage driveway at the west end of the site as illustrated in Photos 1 and 2. Since the proposed building (Figure 2) is set back from the sidewalk, there is expected to be good visibility between drivers exiting the parking garage driveway and pedestrians on the sidewalk.



Photo 1 - Looking west on Bayers Road towards Connolly Street from the parking garage driveway.



Photo 2 - Looking east on Bayers Road towards Oxford Street from the parking garage driveway.

Young Street is an east-west two-lane local street with curb, gutter, and sidewalks on both sides (Photos 3 and 4). While parking is permitted on the south side of the street adjacent to the site, parking is prohibited from 8 AM to 6 PM on the north side. A traffic count obtained by HRM at the Oxford Street / Young Street intersection during 2007 indicated two-way volumes of 180 vehicles per hour (vph) during AM and PM peak hours on Young Street adjacent to the site. While the count is nine years old, it is expected that volumes on Young Street at this location have not changed significantly and are indicative of relatively low peak hour volumes of approximately 200 vph.

Visibility is good on both Young Street approaches to the parking garage driveway at the east end of the site as illustrated in Photos 3 and 4. Since the proposed building (Figure 2) is set back from the sidewalk, there is expected to be good visibility between drivers exiting the site and pedestrians on the sidewalk.



Photo 3 - Looking east on Young Street towards Oxford Street from the parking garage driveway.



Photo 4 - Looking west on Young Street towards Connolly Street from the parking garage driveway.

Trip Generation estimates for the proposed and existing land uses, prepared using published trip generation rates from *Trip Generation, 9th Edition*, (Institute of Transportation Engineers, 2012), are included in Table 1.

Since the 14 existing buildings on the site (which include 8 single family dwellings, 20 apartment units and approximately 4,700 SF of commercial space) will be removed, trips now generated by the existing land uses which are included in background volumes around the site have been considered as a 'credit' when determining additional vehicle trips that will be generated by the redeveloped site.

It is estimated that the proposed mid-rise apartment building with ground level commercial space will generate about 47 two-way vehicle trips (18 entering and 29 exiting) during the AM peak hour and 70 two-way vehicle trips (37 entering and 33 exiting) during the PM peak hour. However, when trips generated by the existing 14 buildings on the site are considered as a credit, it is estimated that the redeveloped site will generate 28 additional two-way vehicle trips (10 entering and 18 exiting) during the AM peak hour and 41 additional two-way vehicle trips (21 entering and 20 exiting) during the PM peak hour.

Table 1 - Trip Generation Estimates for Proposed Development and Existing Land Uses									
Land Use ¹	Units ²	Trip Generation Rates ³				Trips Generated ³			
		AM Peak		PM Peak		AM Peak		PM Peak	
		In	Out	In	Out	In	Out	In	Out
Trip Generation Estimate for the Proposed Development									
Mid-Rise Apartment (Land Use 223)	113 units	0.09	0.21	0.23	0.16	11	23	26	19
Specialty Retail (Use Code 826) ⁴	9,450 KGLA	0.76	0.60	1.19	1.52	7	6	11	14
Trip Generation Estimates for Proposed Development						18	29	37	33
Trip Generation Estimate for the Existing Land Uses									
Single Family (Land Use 210)	8	0.19	0.56	0.63	0.37	2	4	5	3
Mid-Rise Apartment (Land Use 223)	20 units	0.09	0.21	0.23	0.16	2	4	5	3
Specialty Retail (Use Code 826) ⁴	4,700 KGLA	0.76	0.60	1.19	1.52	4	3	6	7
Trip Generation Estimates for Existing Site Buildings ⁵						8	11	16	13
Estimated Additional Trips Generated by the Redeveloped Site									
Additional Vehicle Trip Estimates for the Redeveloped Site ⁶						10	18	21	20
NOTES: 1. Rates are for the indicated Land Use Codes, <i>Trip Generation, 9th Edition</i> , Institute of Transportation Engineers, 2012. 2. KGLA is 'Gross Leasable Area x 1000 square feet'. 3. Rates are 'vehicles per hour per unit'; trips generated are 'vehicles per hour for peak hours'. 4. The Speciality Retail (Land Use 826) rate for 'Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM' has been used. Since there is no published rate for the AM peak hour of adjacent street for this Land Use, and since AM peak hour trips to Speciality Retail are generally low, AM trip rates have been assumed to be 50% of the PM rate with reversal of the directional split. 5. These are the trips generated by existing single family homes, residential apartment units and commercial space on the site which can be considered as a 'credit' for site trip generation estimates for the redeveloped site. 6. These are the estimated additional trips that will be generated by the redeveloped site after consideration of the 'credit' for trips generated by the existing land uses on the site.									

Trip Distribution - While the two parking garage levels for the approximately 127 parking spaces are interconnected by a ramp, 120 spaces (84%) are directly accessed by the Bayers Road driveway, and 27 spaces (16%) are directly accessed by the Young Street driveway. Traffic using the parking garage driveways will be distributed east and west on Bayers Road and Young Street, with the majority of trips expected to use the Bayers Road driveway.

Additional Adjacent Development - The 'Future Development' site shown on the site plan (Figure 2) is proposed as a multi-unit residential building with ground floor commercial space at 3090 Oxford Street in the southwest corner of the Bayers Road and Oxford Street intersection. That proposed development includes approximately 29 apartment units, 10,200 square feet of commercial space, and 29 underground parking spaces, with a parking garage driveway on Oxford Street.

Summary -

1. The proposed development west of Oxford Street with frontages on both Bayers Road and Young Street will include a multi-unit residential building with approximately 113 apartment units, 9,450 square feet of neighbourhood oriented commercial space, and approximately 127 underground parking spaces.
2. The development will be served by a driveways on Bayers Road at the west site boundary and Young Street at the east site boundary. Since the proposed building is set back from the sidewalk at both driveway locations, there is expected to be good visibility between drivers exiting the site and pedestrians on the sidewalk.
3. The site is now occupied by five buildings on Bayers Road, including two single family dwellings, two apartment buildings with a total of 12 units, and an approximately 4,700 square foot commercial building, The Young Street frontage is now occupied by nine buildings, including six single family dwellings and three apartment buildings (total eight units).
4. Site generated trips for the development include approximately 47 two-way vehicle trips (18 entering and 29 exiting) during the AM peak hour and 70 two-way vehicle trips (37 entering and 33 exiting) during the PM peak hour. However, when trips generated by the existing 14 buildings on the site are considered as a credit, it is estimated that the redeveloped site will generate 28 additional two-way vehicle trips (10 entering and 18 exiting) during the AM peak hour and 41 additional two-way vehicle trips (21 entering and 20 exiting) during the PM peak hour.
5. The site is well served by pedestrian facilities and transit services. There are sidewalks on all streets adjacent to the site and Halifax Transit provides service for several routes along Bayers Road with bus stops near the site. There is a marked school crosswalk with activated amber flashing beacons across Bayers Road at the east side of Connolly Street and pedestrian signals are included at the Bayers Road / Oxford Street intersection east of the site.
6. While traffic volumes are relatively high on Bayers Road (two-way volumes of 1,100 vehicles per hour (vph) during the AM peak hour and 1,160 vph during the PM peak hour), Young Street peak hour volumes are expected to be relatively low with approximately 200 vph in each of the AM and Pm peak hours.

7. A 'Future Development' of a 29 multi-unit residential building with approximately 10,200 square feet of ground floor commercial space is proposed east of the site at 3090 Oxford Street in the southwest corner of the Bayers Road and Oxford Street intersection.

Conclusions -

8. Since vehicle trips estimated to be generated by this site will be distributed east and west on both Bayers Road and Young Street, the low to moderate numbers of additional trips are not expected to have any significant impact to the level of performance of adjacent streets and intersections, or the regional street network.
9. Since vehicle trips generated by the proposed site, as well as the proposed development on Oxford Street, will be distributed on the local grid street system, traffic generated by the two sites is not expected to have a significant cumulative impact to traffic performance.
10. Since the site has good pedestrian connections, as well as good transit service on Bayers Road, it is possible that the numbers of site generated vehicle trips could be less than the estimated numbers.

If you have any questions or comments, please contact me by Email to ken.obrien@wspgroup.com or telephone 902-443-7747.

Sincerely:

Original Signed

Ken O'Brien, P. Eng.
Senior Traffic Engineer
WSP Canada Inc.



PROJECT BRIEF



BAYERS & YOUNG | MIXED-USE DEVELOPMENT

West Armdale, Halifax | Nova Scotia

Purpose of submission

WMFares Architects is pleased to make an application for a Site Specific Plan Amendment to the Halifax Municipal Planning Strategy and the Halifax Peninsula Land Use By-law to enable a development agreement for two buildings fronting Bayers Road and Young Street. We are seeking to undertake the required amendments and development agreement processes concurrently and have enclosed the following information for review as part of the application process:

1. A full set of building drawings including site plan, floor plans, elevations
2. 3D views / Renderings
3. Development Data
4. Traffic Impact Statement
5. Site Servicing Schematic

Context, Zoning & Existing Planning Designations

The subject property is comprised of 5 lots zoned C-2A (fronting Bayers Road) and 9 lots zoned R2 (fronting Young Street) under the current Land Use By-law. Under the Halifax Municipal Planning Strategy, the site is primarily designated RES with two COM designations for PIDs 00084822 and 40447393 fronting Bayers Road. There are 14 existing buildings on the subject site with a combined total of 20 apartment units, 9 rented single family dwellings, and approximately 4,700 square feet of commercial retail space.

The surrounding context can be described as medium to low density residential bound by localized retail along main transit arteries (Bayers Road and Oxford Street). The subject through-lot site is located at the neighbourhood edge between R2 and C2-A zoning designations with pre-existing retail and multiunit use. Despite the large commercial storage facility within the residential block, Young Street is characterized by a mixed housing typology of war bungalows, and two to three storey 1950's shingle-clad homes.

The character of Bayers Road on the other hand reflects a miss-match of building typology due to a clear divide of current zoning designations that has resulted in unbalanced urban form on a major street that can arguably be identified as the 'front door' to the Halifax peninsula. The North-West side of Bayers Road exhibits single storey bungalows, whereby the South-East side exhibits a mix of multi-unit apartment buildings bungalows, commercial retail, as well as institutional uses (Catholic Church) all at varied heights, mass and setbacks.

Historically, the neighbourhood block between Bayers, Young, and Oxford Street has undergone growth and shifts in urban form. Pre 1918, the west-end's residential grid terminated at Liverpool Street. In addition, Young and Cork street did not fully extend West to Connaught. Instead, Young and Cork Streets terminated at Oxford, leaving a large parcel of land bound by Bayers, Connaught, and Oxford Street. Subsequently, the subject block was subdivided into smaller residential lots after the West extension of both Young and Cork Street to Connaught Avenue was instated. With two recently approved four to five storey mixed-use developments (Case 19857 and 17829) at the corner of Bayers and Oxford Street, the urban block is yet again undergoing improved neighbourhood growth and development.

The site's location may be considered under-serviced in terms of walkable neighbourhood commercial amenities, yet subject to change upon the development of new mixed-use projects mentioned above. The site is serviced by three Metro Transit routes and is in close proximity to Mumford Road Transit Terminal. Furthermore, the closest park amenity (Ardmore Park) is a few blocks South at the corner of Almond and Oxford Street.

Project Description + Design Strategies

The proposed development includes two separate buildings that respond to pre-existing land uses and existing urban form. Building A has been identified as the proposal's mixed-use component with at-grade retail fronting Bayers Road and an overall stepped building height of 4 to 5-storeys that is in keeping with approved neighbouring developments. The building design displays varied vertical volumes associated with retail store fronts to promote localized neighbourhood retail and built order to what we have dubbed as the peninsula's 'front door'.

Building B, which exhibits a 332-foot building frontage along Young is identified as the development's low-scale residential component capped at 3-storeys in height. In order to break up a rather large building frontage, the proposed mass has been deliberately broken up into smaller townhouse style volumes with varied roof and architectural forms which take proportional cues from neighbouring single family residences to retain a consistent rhythmic streetscape. In addition, ground floor units have direct access to the street with defined garden beds and vegetation to further articulate a lively residential character. Furthermore, Building B has two pedestrian entries and lobbies off Young Street that are characterized by full-height screened gateways. Below-grade parking is accessed by two separate vehicular ramps at opposite corners of the subject site (East and West).

At the heart of proposed design is an internal courtyard between building A and B. This fully landscaped podium will serve as an active outdoor amenity space for tenants with allocated zones for playground, terraced produce gardens, seating and more. In addition, indoor amenity space on level 100 of Building B has direct access to the exterior courtyard for spill-out activity. Building A's siting and terraced stepping at the South-West corner allows for maximum sun exposure into the courtyard and units facing the courtyard. The façade of Building B facing the courtyard takes on similar massing and rooflines of those facing Young Street. Building A's

courtyard façade displays a series of projecting and undulating cube forms, resulting in a playful green space defined by varied volumes, heights, and materiality.

Change of Circumstance and Neighbourhood Compatibility

Amendments to the MPS are not considered unless a change of circumstance is evident, and the existing land-use is no longer appropriate. We offer the following rationale for why new development would be appropriate for this specific site in conjunction with how existing policies no longer apply under current economic, social and cultural climates:

- A primary goal of the Regional Plan is to densify the peninsula and encourage active, walkable streetscapes. The current by-laws restrict feasible high-quality architectural developments that would enrich and enhance neighbourhoods.
- Considering current economic and market trends, the current by-laws limit the densification of larger-sized units as set out by the Regional Plan to promote families moving and living in the urban core.
- The location of the site is in close proximity to existing civic amenities including public transit (Mumford Transit Terminal), parks (Ardmore Park) and community centres (The Forum, Church Hall).
- Existing properties no longer serve their original single family-use, and have been subdivided into walk-up apartment units largely due to the site's centralized location with accessibility to a wide range of civic and commercial amenities.
- Existing multi-unit buildings can be identified within the West-End residential blocks between Young and Chebucto Road.
- The subject site presents a unique condition with a clear division in representation of architectural form as the proposed buildings meet and confront two parallel streets with separate civic identities. As such, the proposed design consciously recognizes these urban conditions to retain specific street character in terms of height, mass, setbacks and materiality. Specifically, the Young Street façade takes on a simple, modern language with massing that reflects existing volumetric rhythm and form.
- The proposed design and programming is compatible with current and neighbouring uses, with primary commercial fabric evident along Oxford and Bayers Road. Incorporating commercial use along Bayers Road enhances public activity and walkability within the pedestrian realm.
- Policies that allow for development agreements can regulate and promote proper urban and architectural design principals to ensure that new developments are built to the highest quality to promote walkability and livability. This approach secures *design* as tool for better living as opposed to an as-of-right process limited by height with no specific controls for good design in all aspects of urbanism, architecture, and landscaping.

Conclusion:

Thank you for considering our application. We are strong believers that design excellence as a problem solving tool in both the public and private realms can serve as a catalyst for urban revitalization, walkability, and livability on the Halifax Peninsula. We look forward to working together with staff in pursuing these unique opportunities.

Sincerely,

Original Signed

1

Jacob JeBailey, Architect
RAIC, NSAA, OAA, M.Arch, BEDS

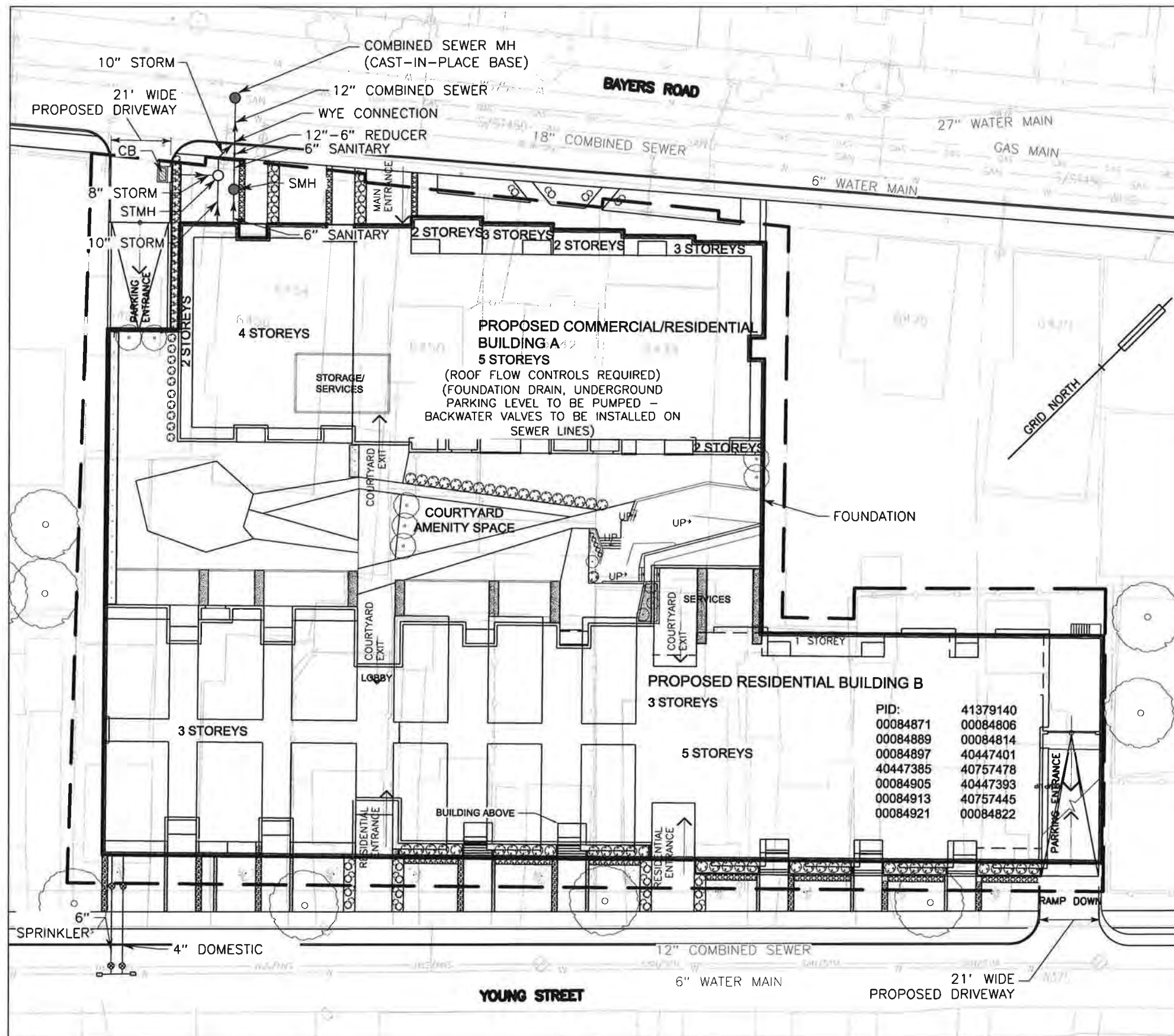
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LEGEND

EXISTING		PROPOSED
⊗/⊗ BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗ BF
⊙	FIRE HYDRANT	⊙
↔	SIAMESE SPRINKLER CONNECTION	↔
▣/▣/▣	CATCH BASIN/PIT	▣/▣/▣
⊙/⊙	POWER POLE/LIGHT POLE	⊙/⊙
⊙	TREE	⊙
⊙	STREET SIGN	⊙
— GAS —	GAS LINE	— GAS —
— W —	WATER MAIN/SERVICE	— W —
— SAN —	SANITARY MANHOLE & PIPE	— SAN —
— STM —	STORM MANHOLE & PIPE	— STM —
— SAN/STM —	COMBINED SEWER	— SAN/STM —
---	PROPERTY LINE/BOUNDARY	---
▭	BUILDING	▭

NOTES

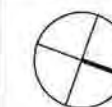
- EXISTING WATER, STORM & SANITARY SEWER, U/G NSPI AND GAS UNDERGROUND PIPING BASED ON HW GIS DATA AND HERITAGE GAS INFORMATION. CONTRACTOR TO VERIFY EXACT LOCATIONS AND ELEVATIONS IN THE FIELD.
- PROPERTY BOUNDARIES HAVE BEEN COMPILED FROM VARIOUS SOURCES AND ARE SUBJECT TO SURVEY.
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NOVA SCOTIA REGULATIONS AND HRM BY-LAWS, HALIFAX WATER DESIGN AND CONSTRUCTION SPECIFICATIONS (LATEST EDITION) AND HRM MUNICIPAL SERVICE SYSTEM GUIDELINES "RED BOOK" (LATEST EDITION).
- CONTRACTOR TO DISCONNECT, PLUG AND ABANDON EXISTING WATER SERVICE LATERALS FOR ALL PROPERTIES WITHIN DEVELOPMENT AREA AT THE MAIN. CONTRACTOR TO REMOVE VALVE BOXES AND ABANDON VALVES AFTER THE LATERALS HAVE BEEN DISCONNECTED FROM MAIN.
- CONTRACTOR TO CAP AND ABANDON ALL EXISTING SEWER LATERALS WITHIN THE DEVELOPMENT AREA AT THE MAIN.
- CONTRACTOR TO HAVE SERVICES LOCATED IN THE FIELD PRIOR TO DIGGING.
- ALL EXISTING DRIVEWAYS IN DEVELOPMENT AREA TO BE REINSTATED WITH NEW SIDEWALK, SOD, CURB AND GUTTER.



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SERVICING SCHEMATIC
 BAYERS RD AND YOUNG ST, HALIFAX, NS

Project No.: 1-1-413 (31370)
 Scale: 1"=40"
 Date: 20 May 2016



WM FARES
 ARCHITECTS

C1



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May 19, 2016

Halifax Water
c/o Steve Skinner
450 Cowie Hill Road
Halifax, NS

From: Rachael Cannings, P.Eng.

File No. 1-1-413 (31370)

Re: 6438-6460 Bayers Rd/6425-6467 Young St, Halifax, NS – Sanitary Lateral Size Confirmation

Project Summary:

	Commercial/Retail	Residential
Building	9,450 ft ² = 878 m ²	113 Units
*Based on May 18, 2016 email from W.M. Fares Group.		

References:

1. Halifax Water (HW) Design & Construction Specifications (2015 Edition), Section 5.2.1:

- $Q = [1.25 \times (a \times M)] + b$ Where;
 - $Q =$ Sanitary sewer flow.
 - $1.25 =$ Safety Factor.
 - $a =$ Average dry weather flow.
 - $M =$ Peaking factor using Harmon Formula; $M = 1 + [14 / (4 + P^{0.5})]$
 - $b =$ Long-term infiltration/inflow allowance.
 - $P =$ Population in thousands
- Residential Average Dry Weather Flow: 330 L/day per person
- Multi-Unit Dwelling Population: 2.25 people per unit
- Infiltration allowance: 0.28 L/ha_{gross}/s

2. Atlantic Canada Wastewater Guidelines (AWG) Manual (2006 Edition), Section 2.3:

- Table 2.1: Average Daily Flows based on establishment type
 - Commercial & Office/Retail Space: 6 L/day per m²
- Section 2.3.4.2 Population Estimates:
 - 85 people per ha_{gross}

Calculation Summary:Population Estimate (P)

Reference:

P₁: AWG Section 2.3.4.2 Commercial/Retail: 85 people per haP₂: HW Section 5.2.1 Residential: 2.25 people per unit

$$P = P_1 + P_2$$

$$P_1 = 85 \times 878 \text{ m}^2 \times (1 \text{ ha}/10,000 \text{ m}^2) = 8 \text{ people}$$

$$P_2 = 2.25 \text{ people per unit} \times 113 \text{ Units} = 255 \text{ people}$$

$$P = 8 \text{ people} + 540 \text{ people} = \mathbf{263 \text{ people (or 0.263)}}$$

Dry Weather Flow (a)

Reference:

a₁: AWG Table 2.1: Commercial/Retail: 6 L/day per m²a₂: HW Section 5.2.1: Residential: 330 L/day per person

$$a = a_1 + a_2$$

$$a_1 = 6 \text{ L/day per m}^2 \times 878 \text{ m}^2 = 5,268 \text{ L/day}$$

$$a_2 = 330 \text{ L/day per person} \times 263 \text{ people} = 86,790 \text{ L/day}$$

$$a = 5,268 \text{ L/day} + 180,840 \text{ L/day} = \mathbf{92,058 \text{ L/day (or 1.07 L/s)}}$$

Infiltration (b)

Reference:

HW Section 5.2.1: Infiltration allowance: 0.28 L/ha_{gross}/sLot Area = 72,746 ft² = 0.676 ha

$$b: \quad 0.28 \text{ L/ha}_{\text{gross}}/\text{s} \times 0.676 \text{ ha} = \mathbf{0.19 \text{ L/s}}$$

Peaking Factor (M)

$$M = 1 + [14 / (4 + P^{0.5})]$$

$$M = 1 + [14 / (4 + (0.263)^{0.5})] = \mathbf{4.10}$$

Sanitary Sewer Flow (Q)

$$Q = [1.25 \times (a \times M)] + b$$

$$Q = [1.25 \times (1.07 \text{ L/s} \times 4.10)] + 0.19 \text{ L/s} = \mathbf{5.67 \text{ L/s}}$$

Sanitary Lateral Size Confirmation:

An 8" (200 mm) PVC lateral at 2.00% slope has a capacity of 60.30 L/s. With Q = 5.67 L/s, the depth of flow will be 41 mm with an average flow velocity of 1.20 m/s. Based on these values, the proposed lateral will have sufficient flow capacity while meeting the minimum and

maximum flow velocity requirements. For additional information or discussion regarding these findings please contact the undersigned.

Regards,

Servant, Dunbrack, McKenzie & MacDonald Ltd.

Original Signed

Rachael Cannings, P.Eng.

Project Engineer

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