Urban Design Brief _ Formal Design Review
288 Booth Street Mixed Use Project

Response to Urban Design Issues identified at Panel pre-consultation

Context

- *The Panel suggests exploring opportunities to give back to the surrounding neighbourhood by creating a community focal point within the building. The building is in a highly visible and prominent location on Somerset Street, and could therefore naturally take on the role as an important civic volume.*

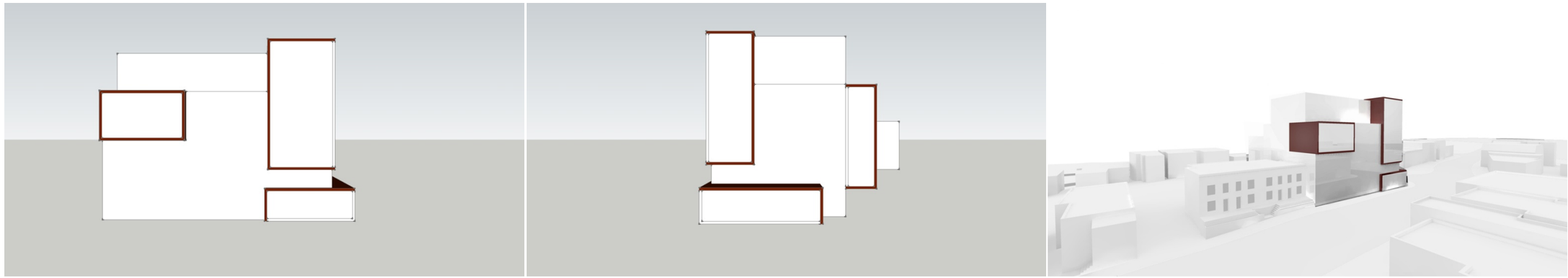
- *The Panel supports the proposed design details that allude to the dominant culture in the community although in a sophisticated manner.*

- The proposal looks to integrate specific characteristics of the surrounding neighborhood, abstractly referential to both cultural and physical/built aspects of the community. It looks to translate the contextual nature into a contemporary design fabric, so that the character can be continued and celebrated while expanding their possibilities. **Urban Design Guideline Response to : Promote development that will enhance and reinforce the recognized or planned scale and character of the streets and To promote development that is compatible with, and complements its surroundings.**

A. <u>Projecting building structures within surrounding context.</u> The neighborhood buildings surrounding Somerset and Booth Streets possess a common characteristic of having smaller structures projecting from their main forms. These have either been built as part of the main building form (ie. Bay windows), or have built onto the forms at a later date (ie. Exit stairways, balconies). It is a particular contextual characteristic this proposal seeks to reflect, celebrate, and to integrate into our design.

Christopher Simmonds Architect

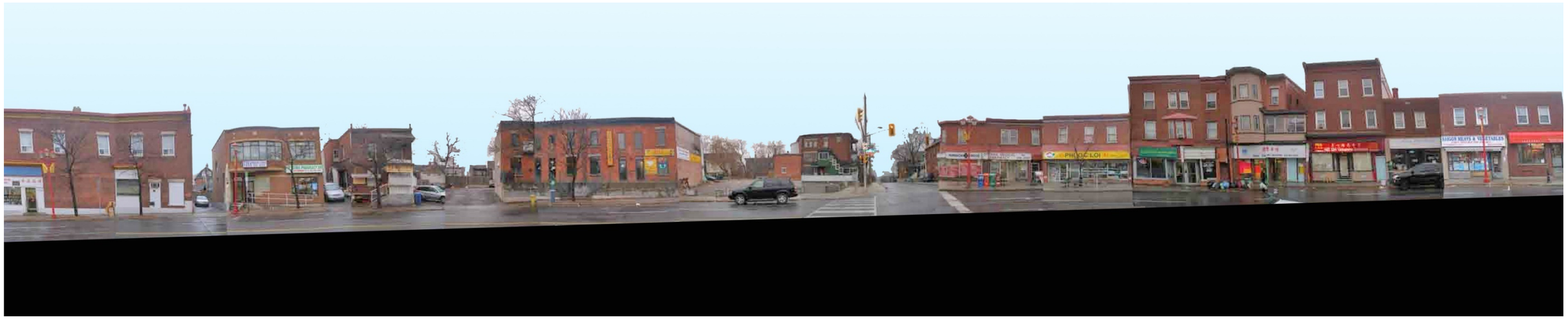
The conceptual massing of this design takes this as its starting point, where a series of boxes within a larger building mass, are proposed, isolated, and where appropriate, projected. The projection of these boxes highlight the importance of this corner within the neighborhood and are therefore located where most suitable on site, along both the Somerset and Booth Street building faces.
Both the dynamics and the colour of these boxes continue the dynamic and organic nature of what has grown throughout the adjacent area's history.



B. Materiality and Colour. The surrounding material fabric of the neighborhood has been primarily built with various types of red brick throughout the years. This materiality and colour is a key component to the nature of the community and in order to take this aspect of materiality further, we have taken this colour and have highlighted it to the dynamic components of the building form. In our design, the deep red colour wraps the exterior of the projections, giving them a greater sense of floating within the larger mass. We selected a deep red, as we believe it to be vital to the neighborhood and part of alluding to the dominant culture within the community. The colour creates a certain continuity in a vibrant and dynamic way.

Urban Design Guideline Response to : To achieve high-quality built form and strengthen building continuity along Traditional Mainstreets .

C. <u>Scale and form of cladding materials</u>. When analyzing the surrounding streetscapes of both Booth and Somerset Streets, there is a natural stepping of the parapets and roof lines due to the slopes along both streets. Somerset Street slopes down to the west of the property, while Booth Street slopes both to the north and to the south of the property. Due to the stepping nature of the parapet lines, we took this as the basis for the scale of the brick cladding on the proposal. The brick cladding refers to the scale of the surrounding building lines and literally takes the stepping within the design of the cladding on the building itself, then back to the scale of the surrounding buildings again. This brick within our proposal remains at a lower height, while the mass that extends above is kept light, transparent, and open. We found this to be the optimal strategy in continuing the scale of the street scale. **Urban Design Guideline Response to : To achieve high-quality built form and strengthen building continuity along Traditional Mainstreets.**



Somerset Streetscape

Proposed Somerset Streetscape

Proposed Booth Streetscape

Christopher Simmonds Architect

- *The Panel encourages the applicant to re-examine the transition to the residential area to the north, and suggests that a three storey volume may be more sympathetic than the proposed four storey volume.*

  Our strategy to transition to the residential area to the north includes the following:

A. Stepping of the penthouse levels back along the north side of the building.
B. Reduction of building volume within the backyard by approx. 18 inches since pre-consultation by the use of concrete construction.
C. Location of communal garden and landscaped area within the backyard area, that will act as a buffer, while enhancing the natural views for backyard neighbours.
D. Reduced massing at 5th and 6th floor levels of volume in backyard area since pre-consultation.

Pre-consultation Massing

Proposed Massing

Christopher Simmonds Architect

Built Form

- *The Panel suggests that the design references should be pushed further by looking at datum lines of adjacent existing buildings. The Panel would like to see more study on how the building relates to elements such as cornices and windows of surrounding buildings.*

  Please refer to ‘Scale and form of cladding materials’ above.

- *Some of the Panel members are wary of the dark upper structures and suggest that the lightness and transparency of the structure should be increased.*

  In general, the materiality and colours have been further explored and adjusted to lighten the building throughout. The metal components of the upper structures and other paneled areas have been lightened in colour, while more areas with the lighter brick within the backyard area have been introduced. The building design utilizes maximum glazing throughout the upper levels.

- *The Panel would like more information to understand whether two vehicle entrances to the site are really necessary.*

  Since the pre-consultation, the underground parking has been deleted from the scheme, which means there is no longer a parking entrance along Somerset Street. This area has been replaced with more retail space and glazed frontage. The entrance along Booth Street to the surface parking in the backyard area has been retained. It is exterior accessed parking, without a garage door. The parking is located under building overhangs, in general hiding it from street views. This parking area also integrates as much natural landscaping as possible.

- *The Panel suggests entertaining the idea of non residential uses on both the first and second floors. Commercial space on both floors would be in keeping with the way Somerset is currently articulated. Signage announcing the uses on the second floor could also be incorporated into the details of the façade. Live/work units could also be considered.*

  Through investigation of this idea, it was not found viable to the project. The infrastructural requirements to make this work were difficult to integrate into the limited building footprint. It was also suggested that perhaps the market might not be there for this type of unit in this particular area.

- *The corner of the building is extremely significant as it appears to project across the street and becomes a view terminus as a result of the bend in Somerset Street. The design of the corner is important and the Panel suggests that it needs further study. Some of the Panel members are uncomfortable with the handling of the corner lantern and question whether it should be recessed. Other Panel members support the design and suggest that it could be pushed a bit further, by cutting the corner at grade level, so that the lantern floats out even more above the space below.*

  Since pre-consultation, we have developed the project as a whole with the integration of further box-like projections within the massing viewed at the corner of Somerset and Booth Streets. These projections, including this higher one at the corner, use colour and dynamic cantilevers to create a vibrant urban intersection. There is now an additional ground level projection that intensifies the pedestrian scale of this urban space, as well as a higher projection along Somerset Street. The deep red colouring of these boxes marks and further amplifies them. The vitality of the projections as a whole work together to intensify the identity at Somerset and Booth.

- *The corner of the site is not symmetrical, and the applicant could capitalise on this condition through further articulation of the building’s prominent corner to respond to this asymmetry and to the view terminus. With a greater setback at Booth, and retail at grade, an outdoor patio space could be created that would reinforce the wider sidewalk on the other side of the street. The Panel notes opportunities to provide outdoor retail space within the site property lines that could be built into the ground floor plan of the building (e.g. by providing a slightly deeper setback). This could create a very dynamic environment that could also enhance restaurant and café-type functions.*

Due to Hydro setback requirements, it was necessary to setback the upper building faces along Booth street a further approx 3m from the property line since our pre-consultation. This gave us the opportunity to develop the corner further. In doing so, we allowed the ground level of the building mass to remain projecting at a pedestrian scale (ground level) and we found that this massing scale works to identify and differentiate both the retail programme within the building, as well as the residential entrance without losing too much area. It is of a scale that can be seen from down Somerset Street upon approaching it (where a recess would not). The landscape plan works with this concept, placing planters and benches that focus on the corner itself.
This massing approach, along with the additional proposed landscaping, street furniture , the vibrant colour, and projections as a whole, work to create an animated urban space.
Urban Design Guideline Response to : To foster compact, pedestrian-oriented development linked to street level amenities.

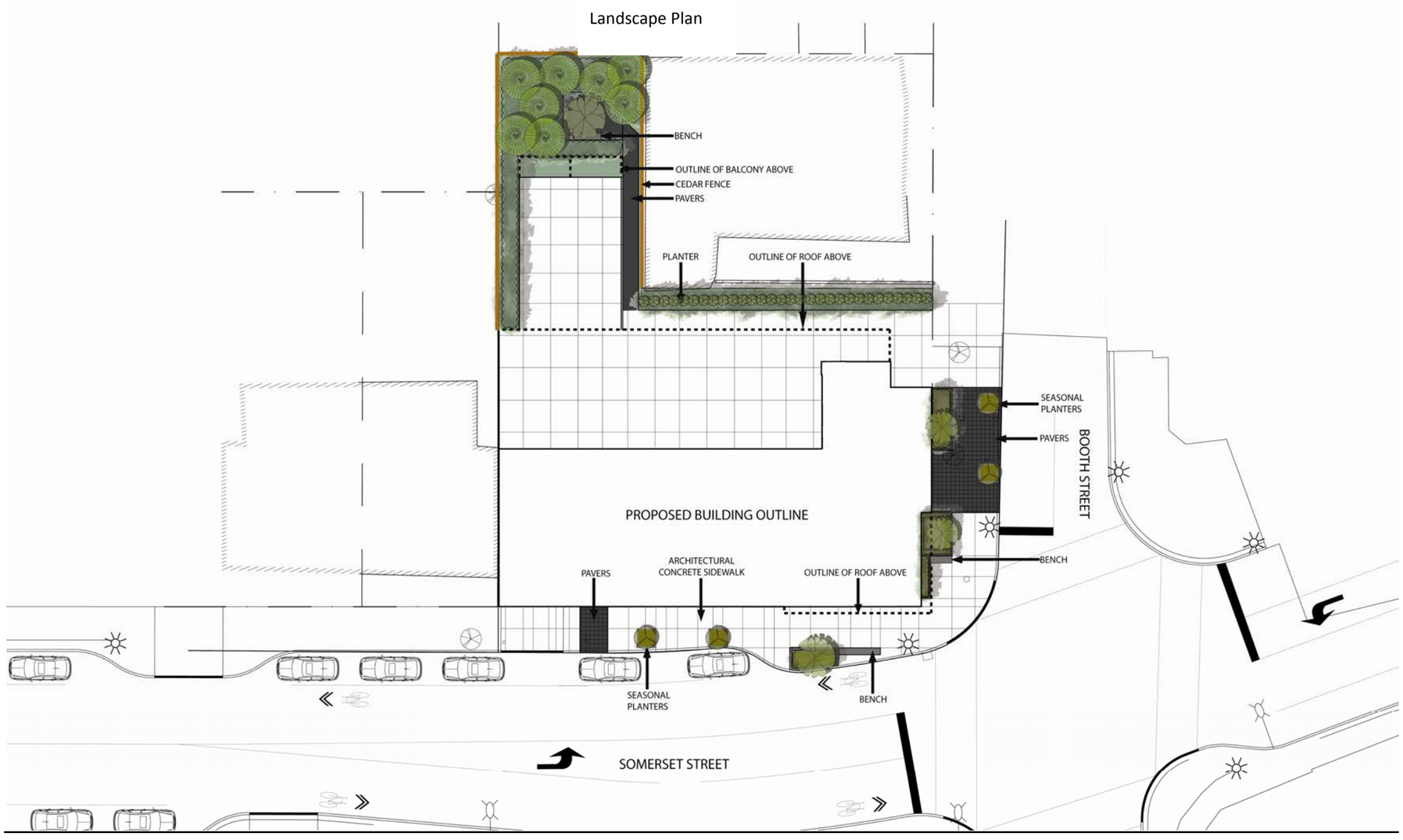
Landscape and Streetscape

- *For the next presentation the Panel would like the applicant to describe in more detail the character of Somerset Street.*
  There appears to be a struggling street tree element along other portions of Somerset. The project must provide enough space for sidewalks and for street trees to grow and thrive.
  At the Formal Review, the Panel would like additional information on the spaces to the rear of the site and, in particular, would like to see how these areas could change from “back of site” to actual spaces.

Christopher Simmonds Architect

The landscape design focuses on the creation of 2 main inhabitable spaces.

A. Corner of Somerset and Booth Street. The design integrates street furniture and planters along both streets. While providing street trees, it also provides street benches that focus views to the corner and increase activity within the corner outdoor space.
B. Backyard. The backyard area is a fully landscaped garden, open to all building residents. It will have both soft and hard landscaping, trees, benches, etc, and will act as both a buffer and a internal courtyard for all surrounding neighbors.

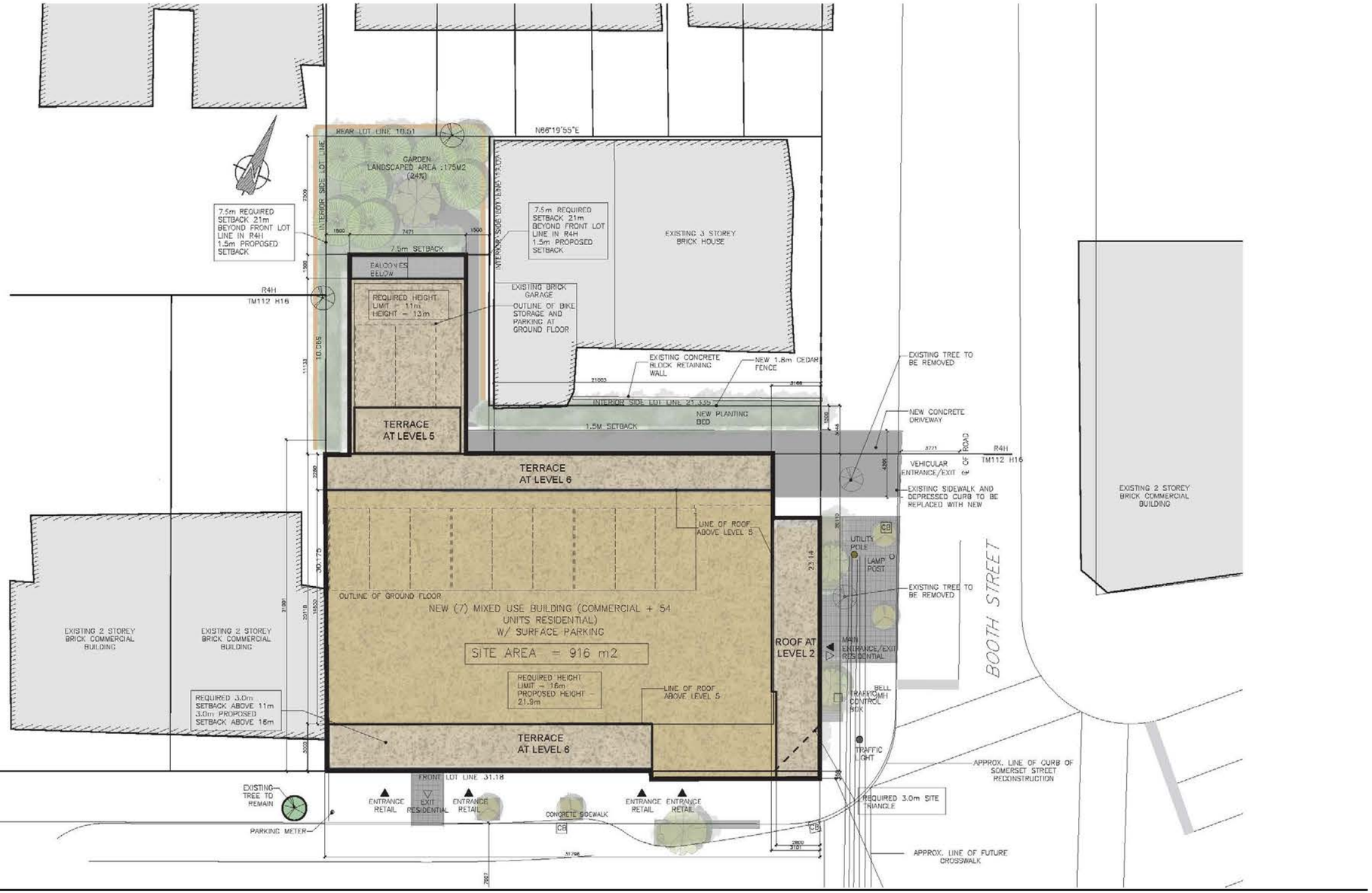


Christopher Simmonds
Architect

View of Somerset and Booth Intersection

Christopher
Simmonds
Architect

Site Plan



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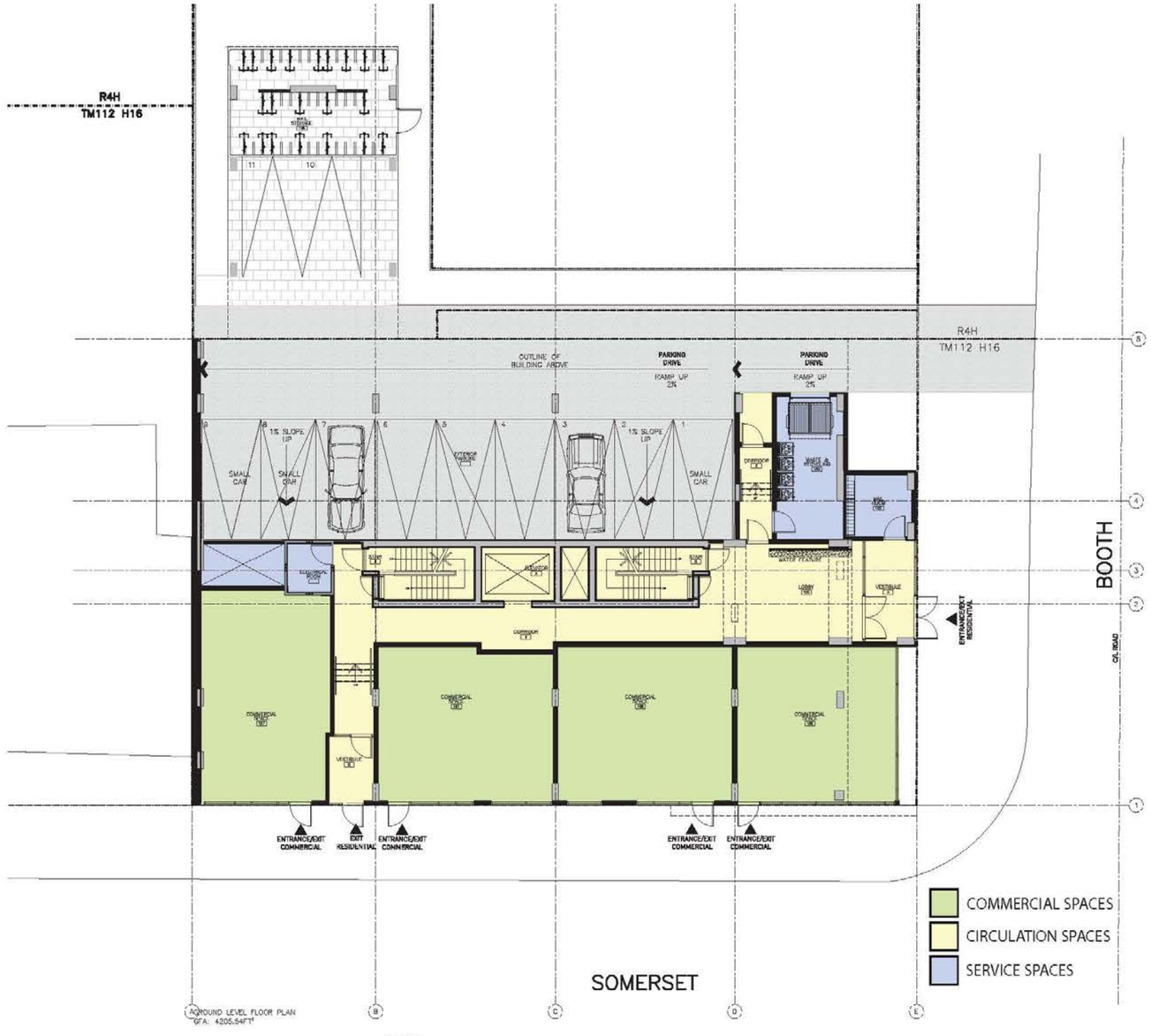
Ground Floor Plan



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South Elevation

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East Elevation

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North Elevation

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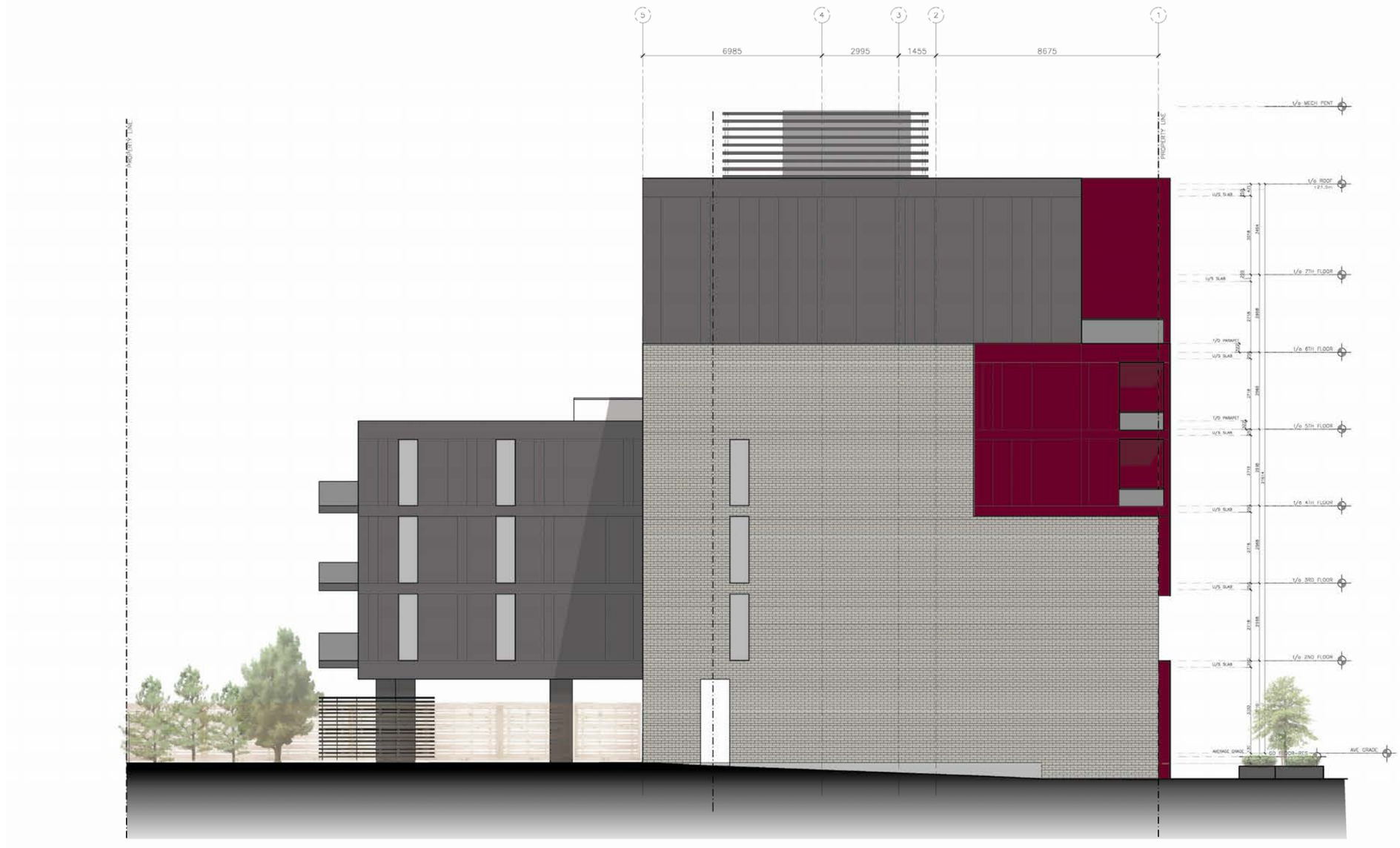
West Elevation



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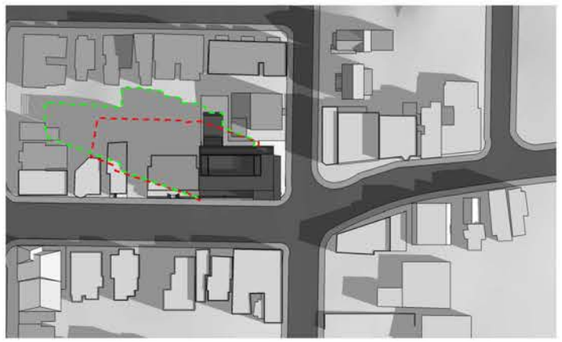
Shadow Studies



SEPT/MAR 21-8AM

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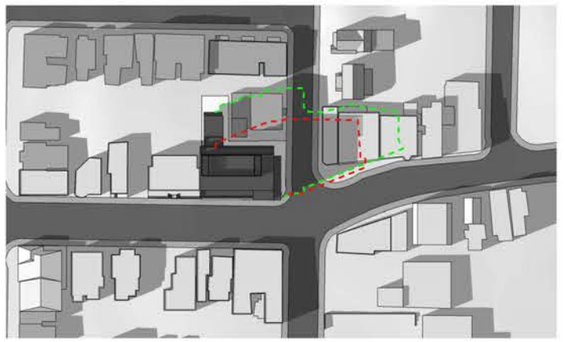

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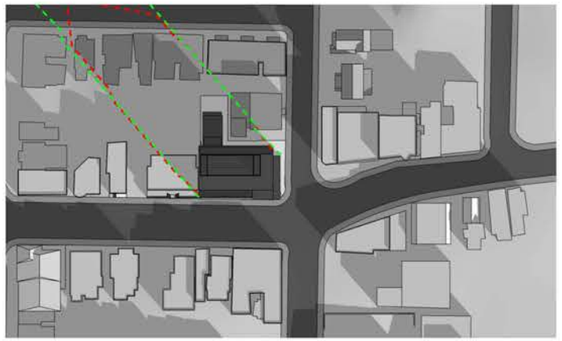

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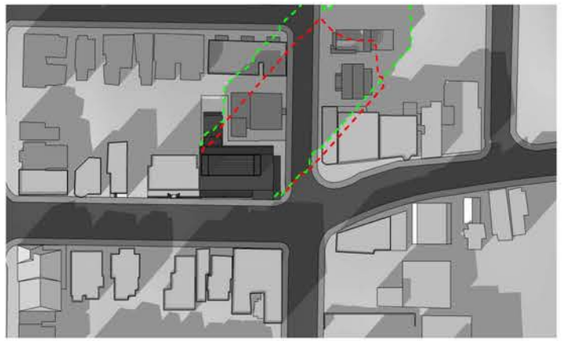
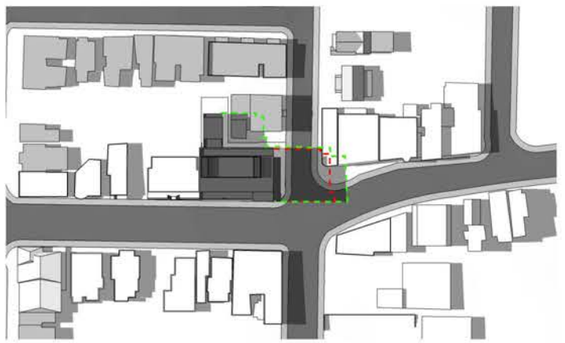
DECEMBER 21-12PM



DECEMEBER 21-3PM

JUNE 21-8AM

JUNE 21-12PM



JUNE 21-4PM

Christopher Simmonds
Architect

1. GENERAL

1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE.
1.2 EXISTING AND NEW ELEVATIONS AND INVERTS SHOWN ARE GEODETIC AND ARE IN METERS.
1.3 EXISTING ELEVATIONS AND LOCATIONS, INVERTS AND SIZES OF EXISTING SERVICES ARE NOT NECESSARILY SHOWN ON PLAN AND THOSE SHOWN ARE DERIVED FROM AVAILABLE INFORMATION AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING CONSTRUCTION. REPORT ANY DIFFERENCES TO ENGINEER. SITE BOUNDARIES AND EXISTING GRADES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY FARLEY, SMIOTH & DENIS SURVEYING LTD. JOB No. 509-10, JUN 10-11
1.4 REFER TO ARCHITECTURAL / LANDSCAPE SITE PLANS FOR EXACT LOCATIONS OF BUILDINGS, PAVED AREAS SIDEWALKS ETC.
1.5 REFERENCE THE LATEST REVISION AND ALL ADDENDUMS OF THE GEOTECHNICAL INVESTIGATION BY
1.6 DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SPECIFICATIONS.
1.7 DRAWINGS ARE TO BE READ IN CONJUNCTION WITH STORM WATER MANAGEMENT REPORT No. 10073-SWM PREPARED BY D. B. GRAY ENGINEERING INC. DATED AUG 22-11.
1.8 OWNER'S MAILING ADDRESS:

1.9 REINSTATE ADJACENT PROPERTIES TO PRE-CONSTRUCTION CONDITIONS.
1.10 REINSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.
1.11 ALL CITY PROPERTY, DAMAGED AS A RESULT OF THIS WORK, SHALL BE REINSTATED TO THE CITY'S SATISFACTION.
1.12 ALL RELEVANT WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT CITY STANDARDS AND SPECIFICATIONS.
1.13 ONTARIO PROVINCIAL STANDARDS & SPECIFICATIONS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.

2. EROSION AND SEDIMENT CONTROL

2.1 THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER CLOTH UNDER THE GRATE OF CATCH BASINS AND MANHOLES COVERS AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS.
2.2 PRIOR TO COMMENCEMENT OF CONSTRUCTION AT ALL MUNICIPAL CATCH BASINS ADJACENT TO THE SITE AND AT ANY MANHOLES OR CATCH BASINS THAT WILL RECEIVE DISCHARGE FROM DE-WATERING OPERATIONS AND ALL NEW CATCH BASINS AS THEY ARE INSTALLED: PLACE GEOTEXTILE FABRIC BETWEEN THE GRATE AND FRAME. INSPECT AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE AND DISPOSE OLD GEOTEXTILE FABRIC AND SEDIMENT WHEN SEDIMENT DEPOSITS ARE GREATER THAN 10mm DEEP AND REPLACE WITH NEW GEOTEXTILE FABRIC. IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED FABRIC. DO NOT REMOVE FABRIC UNTIL CONSTRUCTION IS COMPLETE.

3. GRADING & DRAINAGE

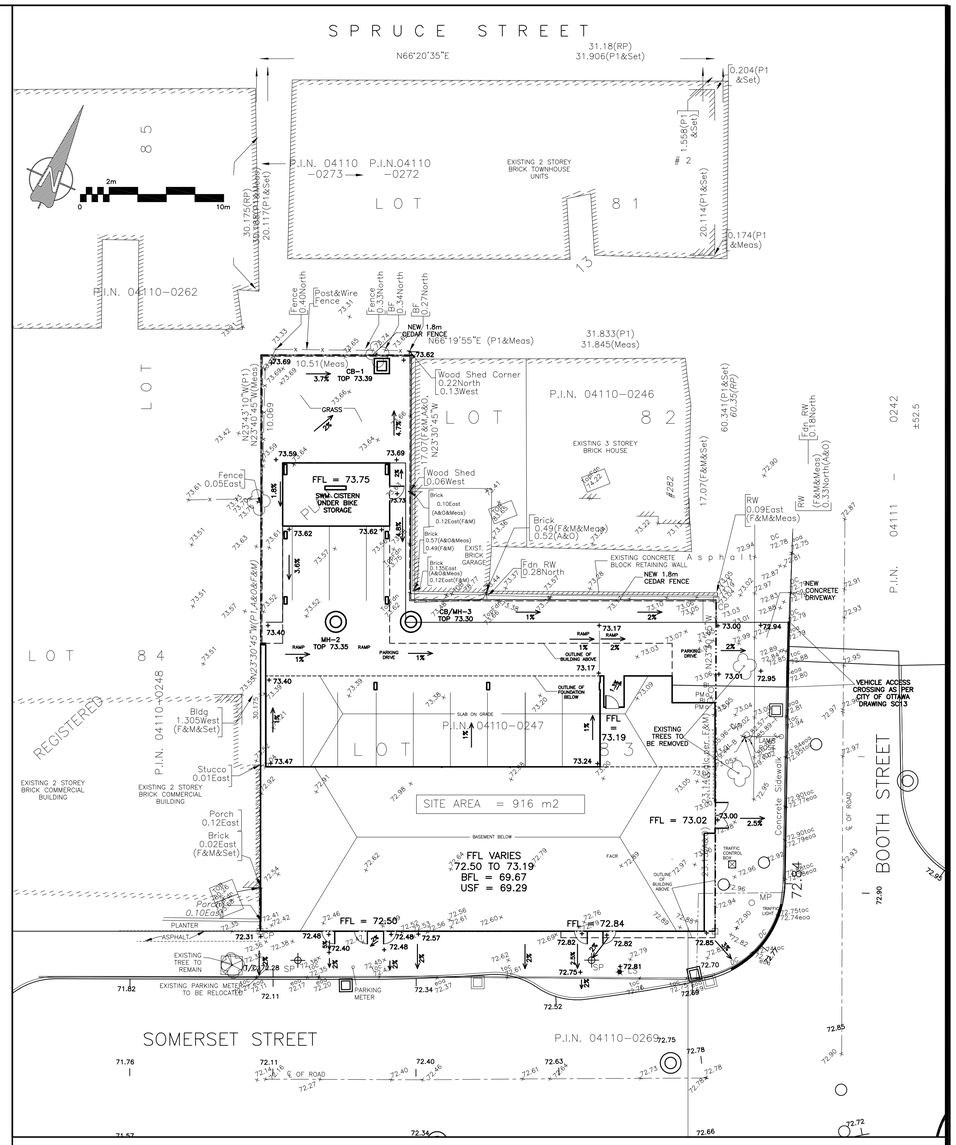
3.1 NEW GRADES TO MATCH EXISTING AT PROPERTY LINE. NO EXCESS DRAINAGE WILL BE DIRECTED TOWARDS THE NEIGHBOUR'S PROPERTY DURING AND AFTER CONSTRUCTION. THERE WILL BE NO ALTERATION TO EXISTING GRADE AND DRAINAGE PATTERNS ON PROPERTY LINE.
3.2 ALL AREAS SHALL BE GRADED TO ENSURE ADEQUATE DRAINAGE AWAY FROM BUILDINGS TO CATCH BASINS, SWALES, DITCHES AND OTHER APPROVED DISPOSAL AREAS. GRADES TO BE GRADUAL BETWEEN FINISHED SPOT ELEVATIONS SHOWN ON DRAWINGS TO PREVENT PONDING .

4. SITE SERVICES

4.1 CAP EXISTNG WATER SERVICE CONNECTION AT CITY WATERMAIN TO CITY OF OTTAWA STANDARDS.
4.2 CAP EXISTING STORM AND SANITARY SEWERS CONNECTIONS WITH WATERTIGHT BULKHEAD AT THE PROPERTY LINE.
4.1 WATER METER SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. No.W30.
4.2 ALL WATER SERVICE MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
4.3 PROVIDE A MINIMUM 2.4 m COVER OVER WATER SERVICE CONNECTION. WHERE THE MINIMUM COVER IS NOT POSSIBLE INSULATE AS PER CITY OF OTTAWA DWG. No. W22. WHERE LESS THAN 2.4 m CLEARANCE FROM AN OPEN STRUCTURE (EG. MANHOLES & CATCHBASINS) PLACE INSULATION AROUND [[WATERMAIN]] AND WATER SERVICE CONNECTIONS AS PER CITY OF OTTAWA DWG. No. W23.
4.4 PROVIDE A MINIMUM 300mm VERTICAL SEPARATION BETWEEN SEWERS AND WATERMAIN / WATER SERVICE CONNECTIONS.
4.5 PROVIDE THRUST BLOCKS AS PER CITY OF OTTAWA STANDARD W-25.3 AT ALL VALVES, TEES, CAPS, BENDS, REDUCERS AND HYDRANTS.
4.6 CONNECTION TO WATERMAIN BY CITY OF OTTAWA, CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT.
4.7 WATERMAIN MATERIALS SHALL BE PVC PRESSURE CLASS 150 DR18.
4.8 SEWER MATERIAL SHALL BE PVC SDR-35 (SDR-28 FOR DIAMATERS 150mm OR LESS) AND SHALL CONFORM TO CSA B182.2 AND SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS. PROVIDE A MINIMUM 0.3m HORIZONTAL SEPARATION BETWEEN SEWER CONNECTIONS AND WATER SERVICE CONNECTION. PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION BETWEEN SEWERS AND WATERMAIN. SEWERS WITHIN 2.44 m HORIZONTAL DISTANCE OF THE WATERMAIN OR WATER SERVICE PIPE SHALL BE PVC SDR-35 WITH JOINTS CAPABLE OF BEING PRESSURE TESTED TO A MINIMUM 345 kPa (50psi) AND SHALL CONFORM TO CSA B137.3. (IPEX Ring-Tite or EQUAL) AND THE SEWAGE SYSTEM SHALL BE CONSTRUCTED OF PIPING WHICH IS PRESSURE TESTED IN ACCORDANCE WITH OBC 7.3.7 (TESTING OF POTABLE WATER SYSTEMS) AT 345 kPa (50psi).
4.9 MANHOLES & CATCHBASINS:
a. PRECAST MANHOLE UNITS: TO OPSS 1351 WITH BASE SLAB OR MONOLITHIC BASE. TOP SECTIONS ECCENTRIC CONE OR FLAT LAB TOP TYPE WITH OPENING OFFSET FOR VERTICAL LADDER INSTALLATION.
b. MANHOLE STEPS: TO OPSD 405.01
c. ADJUSTING RINGS: TO ASTM C 478M.
ALUMINUM SURFACES IN CONTACT WITH OR CAST INTO CONCRETE SHALL HAVE POLYETHYLENE ANCHOR INSULATING SLEEVES.
d. PRECAST CATCH BASIN SECTIONS: TO OPSS 1351.
e. JOINTS: SHALL BE MADE WATERTIGHT USING BUTYL BASED, FLEXIBLE WATERSTOP/JOINT SEALANT MATERIAL.
f. SANITARY SEWERS: BENCH TO PROVIDE A SMOOTH U-SHAPED CHANNEL TO CITY OF OTTAWA STANDARDS. SLOPE INVERT TO ESTABLISH SEWER GRADE.
g. STORM SEWERS: MANHOLES SHALL HAVE A 300mm SUMP AND CATCH BASINS AND DITCH INLETS SHALL HAVE A 600mm SUMP.
h. FRAMES, GRATES AND COVERS TO OPSS 1850 AND CITY OF OTTAWA STANDARDS. GRATES AND COVERS TO BEAR EVENLY ON FRAMES. PAINTED WITH ONE SHOP COAT OF ASPHALT OR TAR BASE BLACK, ALL JOINTS AND CREVICES SHALL BE THOROUGHLY COATED.
i. GRATINGS (FOR DITCH INLETS): FABRICATED LATTICE OF WELDED QUALITY MILD CARBON STEEL BARS CONFORMING TO OPSS 1850 AND ASTM A569, GRADE 1015, HOT DIPPED GALVANIZED CONFORMING TO CSA G164-M.
j. GRANULAR BEDDING AND BACKFILL: OPSS GRANULAR

5. CONSTRUCTION:

5.1 PRIOR TO COMMENCING WORK:
A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.
B. SIZE, DEPTH AND LOCATION OF EXISTING UTILITIES AND STRUCTURES AS INDICATED ARE FOR GUIDANCE ONLY. EXISTING UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON PLANS. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. NOTIFY ALL APPLICABLE OWNERS, UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION OF PROPOSED WORK AND LOCATE AND CLEARLY IDENTIFY ALL EXISTING SERVICES, UTILITIES AND STRUCTURES ON AND ADJACENT TO SITE. CONFIRM LOCATIONS OF BURIED SERVICES AND UTILITIES BY CAREFUL TEST EXCAVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER.
C. COORDINATE AND SCHEDULE WORK WITH THE AUTHORITIES AND OTHER TRADES.
5.2 MAINTAIN AND PROTECT FROM DAMAGE, SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
5.3 PROTECT EXISTING BUILDINGS, TREES AND OTHER PLANTS, LAWNS, FENCING, SERVICE POLES, WIRES, PAVEMENT, SURVEY BENCH MARKS AND MONUMENTS AND OTHER SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS. DO NOT DISTURB SOIL WITHIN BRANCH SPREAD OF TREES OR SHRUBS THAT ARE TO REMAIN.
5.4 PROVIDE TRAFFIC CONTROL AND SAFETY MEASURES INCLUDING ANY NECESSARY PERSONEL AND THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNAGE AND BARRIERS.
5.4 REMOVE OBSTRUCTIONS, ICE AND SNOW, FROM SURFACES TO BE EXCAVATED.
5.5 CUT PAVEMENT AND / OR SIDEWALK NEATLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY.
5.6 STOCKPILE GRANULAR AND FILL MATERIALS IN MANNER TO PREVENT SEGREGATION AND PROTECT FROM CONTAMINATION.
5.7 EXCAVATION, TRENCHING & BACKFILL:
A. SHORE AND BRACE EXCAVATIONS, PROTECT SLOPES AND BANKS AND PERFORM ALL WORK IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT AND OTHER AUTHORITIES HAVING JURISDICTION.
B. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.5.13 C. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
D. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURAL WATERCOURSES.
E. EXCAVATE TO LINES, GRADES, ELEVATIONS AND DIMENSIONS AS INDICATED. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL OFF SITE.
F. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
G. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FROST TAPERS FROM FROST LINE TO SUB-GRADE.
H. CORRECT OVER-EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95 % OF CORRECTED MAXIMUM DRY DENSITY.
I. SUB-GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
J. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
K. BEDDING AND SURROUND MATERIAL FOR SEWERS SHALL BE OPSS A. BEDDING AND SURROUND MATERIAL FOR WATERMAIN AND WATER SERVICE CONNECTIONS SHALL BE OPSS A OR OPSS M.
L. DO NOT USE BEDDING, SURROUND OR BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
M. PIPE BEDDING SHALL BE 150MM THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
N. PLACE SURROUND MATERIAL AROUND PIPES TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES.
O. PLACE BEDDING AND SURROUND AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS. PLACE FILL AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300MM COMPACTED THICKNESS.
P. COMPACT EACH LAYER TO 95% OF CORRECTED DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
Q. DO NOT BACKFILL AROUND OR OVER CAST-IN-PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
5.8 PIPES:
A. HANDLE PIPE USING METHODS APPROVED BY MANUFACTURER.
B. LAY, CUT AND JOIN PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
C. USE ONLY FITTINGS AS RECOMMENDED BY PIPE MANUFACTURER.
D. LAY PIPES ON PREPARED BED, TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHAPED BED THROUGHOUT ITS FULL LENGTH, FREE OF SAGS OR HIGH POINTS.
E. DO NOT EXCEED MAXIMUM JOINT DEFLECTION RECOMMENDED BY PIPE MANUFACTURER.
F. AT RIGID STRUCTURES, INSTALL PIPE JOINTS NOT MORE THAN 1.2m FROM SIDE OF STRUCTURE.
G. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATERTIGHT BULKHEAD AT OPEN END OF LAST PIPE LAID TO PREVENT ENTRY OF FOREIGN MATERIALS.
H. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATERTIGHT CONNECTIONS TO MANHOLES.
I. USE NON-SHRINK GROUT WHEN SUITABLE GASKETS ARE NOT AVAILABLE. JOINTS SHALL BE STRUCTURALLY SOUND AND WATERTIGHT.
J. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
K. REPAIR OR REPLACE PIPE, PIPE JOINT OR BEDDING FOUND DEFECTIVE.
L. PERFORM FIELD TESTS FOR QUALITY CONTRROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.01.16 AND 407.07.26 AND IN ACCORDANCE WITH THE PLUMBING CODE.
M. REPAIR AND RETEST SEWER LINE AS REQUIRED.
N. REPAIR VISIBLE LEAKS REGARDLESS OF TEST RESULTS.
O. TELEVISION AND PHOTOGRAPHIC INSPECTIONS: CONDUCT TWO CCTV OR PHOTOGRAPHIC INSPECTIONS OF SEWERS. FIRST INSPECTION AFTER COMPLETION OF CONSTRUCTION. SECOND INSPECTION IMMEDIATELY PRIOR TO END OF ONE YEAR TO WARRANTY PERIOD. A PAN AND TILT CAMERA SHOULD BE USED. REPAIR SEWER LINE AS REQUIRED.
5.9 MANHOLES & CATCHBASINS:
A. JOINTS: SHALL BE MADE WATERTIGHT.
B. SET PRECAST CONCRETE BASE ON 150mm MINIMUM OF GRANULAR BEDDING COMPACTED TO 100% CORRECTED MAXIMUM DRY DENSITY.
C. MAKE EACH JOINT WATERTIGHT WITH RUBBER RING GASKETS.
D. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
E. PLACE FRAME AND COVER ON TOP SECTION TO ELEVATION AS INDICATED. IF ADJUSTMENT REQUIRED USE CONCRETE RINGS TO A MAXIMUM OF 300mm.
F. CLEAN UNITS OF DEBRIS, FOREIGN AND SURPLUS MATERIALS. REMOVE FINS AND SHARP PROJECTIONS. PREVENT DEBRIS FROM ENTERING SYSTEM.
5.10 MAINTAIN RECORD DRAWINGS AND RECORD ACCURATELY DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND CHANGES MADE BY CHANGE ORDER OR ADDITIONAL INSTRUCTION. UPDATE DAILY AND MAKE AVAILABLE ON-SITE FOR REVIEW THROUGHOUT THE CONSTRUCTION PERIOD. MARK CHANGES IN RED INK. RECORD DRAWINGS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO CHANGES OF DIMENSION AND DETAIL; AND HORIZONTAL AND VERTICAL LOCATIONS OF UNDERGROUND UTILITIES AND APPURTENANCES REFERENCED TO A PERMANENT SURFACE STRUCTURE.
5.11 REINSTATE PAVEMENTS AND SIDEWALKS DISTURBED BY EXCAVATION TO THICKNESS, STRUCTURE AND ELEVATION WHICH EXISTED BEFORE EXCAVATION.
5.12 CLEAN AND REINSTATE AREAS AFFECTED BY THE WORK.



DRAWING LEGEND

- CB — CATCH BASIN
- MH — MANHOLE
- CB/MH — CATCH BASIN/MANHOLE
- WM — WATER SERVICE / WATERMAIN
- SAN — SANITARY SEWER
- ST — STORM SEWER
- CS — CURB STOP
- FH — FIRE HYDRANT
- M — WATER METER
- R — REMOTE WATER METER READOUT
- UP — UTILITY POLE
- X65.75 — EXISTING GRADE ELEVATION
- + 93.79 — PROPOSED GRADE ELEVATION
- 0.5% — SLOPE OF GRADE
- PROPERTY LINE
- FFL — FIRST FLOOR ELEVATION
- TOF — TOP OF FOUNDATION ELEVATION
- BFL — BASEMENT FLOOR ELEVATION
- USF — UNDERSIDE OF FOOTING ELEVATION

KEY PLAN

No.	Date	Revision
1	AUG 22-11	ISSUED FOR FINAL FORMAL DESIGN REVIEW

D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains
1052 Karsh Drive
Ottawa, Ontario.
K1G 4N1
Tel: (613) 249-8044
Fax: (613) 249-9815
email: dbgray@rogers.com

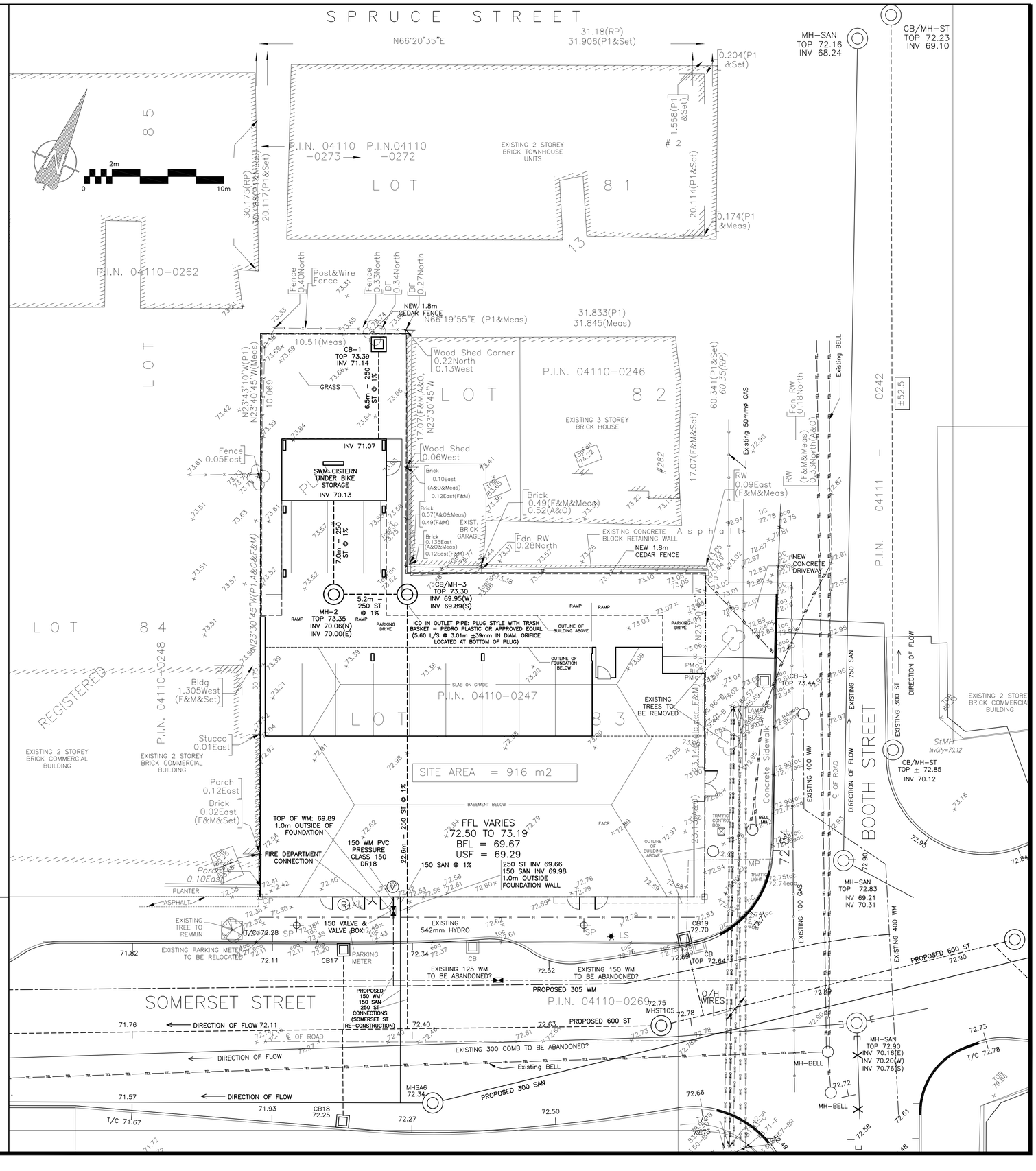
Project
PROPOSED MIXED USE BUILDING
288 BOOTH STREET
OTTAWA, ONTARIO.

Drawing Title
GRADING PLAN & NOTES

Engineer's Seal
LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
AUG 22-11
PROVINCE OF ONTARIO
NOT VALID UNLESS SIGNED & DATED

Drawn	D.B.G
Hor. Scale	1: 200
Vert. Scale	
Date	MAR 23-11
Job	10073

Drawing No.
SG-2
of 2



CATCHBASIN & MANHOLE SCHEDULE

REF	TOP	SIZE	TYPE	INVERT AT INLET	INVERT AT OUTLET	NOTES
STORM SEWER						
CB-1	73.39	600 x 600mm	PRE-CAST CONCRETE CATCHBASIN	-	71.14	TO OPSD 705.010 & CITY OF OTTAWA STANDARDS
MH-2	73.35	1200mm	PRE-CAST CONCRETE MANHOLE	70.06(N)	70.00(E)	TO OPSD 705.010 & CITY OF OTTAWA STANDARDS
CB/MH-3	73.30	1200mm	PRE-CAST CONCRETE CATCHBASIN/ MANHOLE	69.95(W)	69.89(S)	TO OPSD 705.010 & CITY OF OTTAWA STANDARDS

DRAWING LEGEND

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- MH — MANHOLE
- CB/MH — CATCH BASIN/MANHOLE
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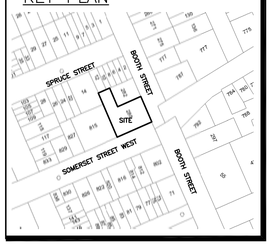
KEY PLAN



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D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

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email: dbgray@rogers.com

Project

PROPOSED MIXED USE BUILDING 288 BOOTH STREET
OTTAWA, ONTARIO.

Drawing Title

SITE SERVICING PLAN & DETAILS

Engineer's Seal

LICENCED PROFESSIONAL ENGINEER
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AUG 22-11
PROVINCE OF ONTARIO
NOT VALID UNLESS SIGNED & DATED

Drawn	D.B.G
Hor. Scale	1:200
Vert. Scale	
Date	MAR 23-11
Job	10073

Drawing No.

SG-1 of 2