Date: May 1, 2024

Project Description: Commercial Plaza – Phase 1 (1 Building Pad as per the LLWS + 5 Buildings Base building)

Project Address: 1300 Fanshawe Park Rd E, London, ON N5X 3Z8.

Westdell Development Corp. on behalf of "Stoney Creek Commons Inc." is requesting a written proposal for the Construction of *commercial buildings, consisting of three commercial one-story buildings and site servicing as per drawings and description below.*

1. GENERAL

1.1. Project Description:

- Buildings: CRU 1, 3, 5, 6 & 7.
- Site Servicing to all Buildings as per drawings.

1.2. Project priorities:

- Building 1A Pad, Site servicing, section 1 asphalt, Building 1 B & C, Buildings 7,6 5, and 3

1.3. Contractor to include all costs associated with temporary utilities and winter heat.

1.4. Contractor to arrange for and coordinate the required permanent utility hookups (i.e., gas, power, phone, water, etc.)

1.5. All materials, labour, and fees for all licenses and deposits, utility charges, applicable taxes, duties, design, and occupancy permits are to be included in the bid price.

1.6. Contract to be CCDC 02 - 2020 Stipulated Price Contract.

1.7. The contractor is to submit a construction schedule with the response to the RFP and Bid form.

1.8. Contractor to provide a Construction Progress Report Template

1.9. All work is to be warrantied as provided in CCDC for a minimum of one (1) year or in accordance with manufacturer warranties from the date of substantial performance.

1.10. The contractor is to provide all project closeout documents no later than four (4) weeks after the substantial completion date.

1.11. The Bidder shall, if requested by Landlord, provide evidence of experience, ability, capacity, financial resources, and reputation deemed necessary for the performance of the Contract.

1.12. Safety – Contractor to provide copies of all safety documentation required by MOL and company policy. These include but are not limited to proof of training, toolbox talks, weekly inspections, regular audits, field inspections, near-miss, and incident reports.

1.13. Landlord's standard method for measuring floor area complies with BOMA's Standard Method for Measuring Floor Area in Office Building – Store Area.

2. REQUEST FOR INFORMATION (RFI) DURING TENDERING PERIOD

All RFI's are to come through to Bassam Dahrouj & Khaled Mahmoud at Westdell Development Corp. via email only at bdahrouj@westdellcorp.com and kmahmoud@westdellcorp.com, No verbal or other means will be accepted.

RFIs will only be accepted up to 72 hours prior to closing.

3. PROPOSALS & CONTRACT TIME

Please refer to below "high-level milestone dates" provided:

- **Closing Date: 6th of May 2024, 2:00 PM**
- **Award Date: Approximately 3 weeks from Closing.**
- **Construction Start Date: ASAP**
- **Tentative Duration: Please provide a schedule.**

A full project schedule is due as part of the RFP response:

4. OWNER'S REQUIREMENTS LIST:

The Owner's Requirements list below describes the general requirements of the project. Your proposal should include an outline of the minimum specification proposed (Proposed alternates to be identified separately for review):

4.1. Project's priorities in order: Building 1A Pad, Site servicing, section 1 asphalt, Building 1 B & C, Buildings 7,6 5, and 3

4.2. Landlord work schedules, Tenants drawings, and specifications attached "If any" to be read in conjunction with the Request for Proposal and the Owner's Requirements List. In case of conflict, the tenant information governs.

4.3. All work is to be in accordance with the requirements (itemized and reasonably inferred) of the documents included within this RFP package. Where there is a conflict in scope, the more stringent shall apply.

4.4. All conflicts and vagaries of scope must be clarified with the Owner during the Proposal Period and specified in writing with the tender submittal.

4.5. All work including materials and execution to comply with the requirements of the applicable Building Code, latest revision, and all local Municipal Building Codes and Bylaws in effect at the date of execution of the contract.

4.6. All drywall is to be taken up to the deck, taped, sanded, primed, and ready for Tenant's paint.

4.7. Fire Protection to meet applicable codes.

4.8. Gas connection application and coordination with local gas utility by Contractor.

4.9. Hydro Service Connection coordination with local utilities by Contractor.

4.10. Contractor to meet all municipal and/or tenant requirements for fire alarm systems "If applicable".

4.11. Electrical scope to meet the requirements of codes, and as outlined in Drawings, Landlord's work schedules.

4.12. Contractor to Provide allowance for Winter Heat Charges, Mcdonald's Drive-Thru Infrastructure, and Starbuck's Drive-Thru Infrastructure.

4.13. Contractor to maintain an organized environment throughout the construction process with the help of construction/project management software to streamline communications such as RFI's, Change Orders, Shop Drawings, As-builts, etc.

5. DOCUMENTS ISSUED – CRU 1, 3, 5, 6 & 7.

5.1. Request for Proposal

5.2. Bid form with Cost breakdown "Please fill and submit Bid form for each building."

5.3. Site Plan Drawings (3 Drawings): Sheet# SP1, SP2, SP3. Issued for SPA, dated March 20, 2024, By SBM.

5.4. Existing conditions, removals, and sediment & erosion control Drawing (2 Drawings): Sheet#: C2.1, C2.2. Issued for SPA dated March 22, 2024, By SBM.

5.5. Site Servicing Drawings (5 Drawings): Sheet# C3.1, C3.2, C3.3, C3.4, C3.5. Issued for SPA, dated March 22, 2024, By SBM.

5.6. Site Grading Drawing (4 Drawings): Sheet# C4.1, C4.2, C4.3, C4.4. Issued for SPA, dated March 22, 2024, By SBM.

5.7. Traffic Management Drawing (1 Drawing): Sheet# C5. Issued for SPA, dated March 22, 2024, By SBM.

5.8. Standard Details Drawing (1 Drawing): Sheet# C6, Issued for SPA, dated March 22, 2024, By SBM.

5.9. Landscape Drawings (5 Drawings): Sheet # L1.1, L1.2, L1.3, L1.4, L2. Issued for SPA5, dated February 27, 2024, By SBM.

5.10. Photometrics Drawing (1 Drawing): Sheet# EP1. Issued for SPA5, dated February 28, 2024, By SBM.

5.11. Electric Site Plan Drawing (1 Drawing): Sheet# E100. Insured for Coordination, dated April 4, 2024, By Creative Structures.

5.12. Building 1(Units B & C):

- Unit 1B: Architectural (17 Drawings): A0.0 to A6.0. IFT, dated April 2, 2024, By Creative Structures.
- Units 1B & 1C: Structural (21 Drawings): S0.0 to S7.2. IFT, dated April 3, 2024, By IE Design.
- Unit 1B: Mechanical (9 Drawings) M0 to M8. IFT, dated March 25, 2024, By Metco.
- Unit 1B: Electrical (5 Drawings) E001 to E301. IFT, dated April 2, 2024, By Creative Structures.
- Unit 1B: Sprinklers (2 Drawings) FP-1, FP-2. IFP, dated April 6, 2024, By SDC.
- Unit 1B: Sprinklers Calculation (40 Pages) dated April 6, 2024, By SDC.
- Unit 1C: Architectural (12 Drawings): A0.0 to A6.0. IFT, dated April 2, 2024, By Creative Structures.
- Unit 1C: Mechanical (6 Drawings) M0 to M5. IFT, dated March 29, 2024, By Metco.
- Unit 1C: Electrical (4 Drawings) E001,E100,E101,E300. IFT, dated April 2, 2024, By Creative Structures.
- Unit 1C: Sprinklers (2 Drawings) FP-1, FP-2. IFP, dated April 2, 2024, By SDC.
- Unit 1C: Sprinklers Calculation (20 Pages) dated April 7, 2024, By SDC.

5.13. Building 3:

- Architectural (13 Drawings): A-0.0 to A-6.0. IFP, dated April 2, 2024, By Creative Structures.
- Structural (18 Drawings): S-0.0 to S-7.1. IFP, dated April 3, 2024, By IE Design.
- Mechanical (6 Drawings) M0 to M5. IFP, dated March 29, 2024, By Metco.
- Electrical (4 Drawings) E001 to E300. IFP, dated April 2, 2024, By Creative Structures.

5.14. Building 5:

- Architectural (13 Drawings): A-0.0 to A-6.0. IFP, dated April 2, 2024, By Creative Structures.
- Structural (18 Drawings): S-0.0 to S-7.1. IFP, dated April 3, 2024, By IE Design.
- Mechanical (6 Drawings) M0 to M5. IFP, dated March 25, 2024, By Metco.
- Electrical (4 Drawings) E001 to E300. IFP, dated April 2, 2024, By Creative Structures.

5.15. Building 6:

- Architectural (15 Drawings): A-0.0 to A-6.0. IFP, dated April 3, 2024, By Creative Structures.
- Structural (16 Drawings): S-0.0 to S-7.1. IFP, dated April 3, 2024, By IE Design.
- Mechanical (6 Drawings) M0 to M5. IFP, dated March 25, 2024, By Metco.
- Electrical (4 Drawings) E001 to E300. IFP, dated April 3, 2024, By Creative Structures.

5.16. Building 7:

- Architectural (12 Drawings): A-0.0 to A-6.0. IFP, dated April 3, 2024, By Creative Structures.
- Structural (19 Drawings): S0.0 to S7.1. IFP, dated April 3, 2024, By IE Design.
- Mechanical (6 Drawings) M0 to M5. IFP, dated March 25, 2024, By Metco.
- Electrical (3 Drawings) E001 to E300. IFP, dated April 3, 2024, By Creative Structures.

5.17. Landlord's Work Schedules

- Metro LLWS – For Coordination (Building 1 Unit A)
- Shoppers LLWS (Building 1 Unit B)
- Dollarama LLWS (Building 1 Unit C)
- Adelaide North Dental Care LLWS (Building 6 Unit B)
- Osmow's LLWS (Building 5 Unit A)
- Stacked LLWS (Building 5 Unit F)
- McDonald's LLWS (Building 3 Unit A)
- Starbuck LLWS (Building 7 Unit A).
- Contractor to request Tenant Drawings for coordination at a later date.

5.18. Addendum#1 : Including

- RFis response by IED
- Leasing plan
- Geotechnical report
- LLWS of Starbucks

5.19. Addendum#2: Including

- RFIs response by Creative Structures.
- Off site work drawings by SBM.
- Geotechnical Report by GSPrimo.

6. PROVIDED BY OWNER

6.1. The owner will make all arrangements regarding the application for and payment of the Building Permit and associated costs.

6.2. Development costs and associated fees by Owner.

6.3. Cost and coordination of Testing and Inspection Consultant(s) as directed by the Owner.

6.4. Application of Hydro service is by Owner, coordination of service site works is by contractor.

6.5. Application of Gas Services is by Contractor, and coordination of gas site works is by contractor.

7. PROPOSAL PERIOD

You are requested to submit your proposals **(via E-mail only)** on your company letterhead along with the detailed breakdown sheet addressed to:

Stoney Creek Commons Inc. C/O Westdell Dev. Corp.
Attention: Khaled Mahmoud (kmahmoud@westdellcorp.com) & Bassam Dahrouj (bdahrouj@westdellcorp.com)

No later than Monday 6th May 2024, 2:00 PM

- The construction schedule showing the construction period must be submitted with the tender.
- The contractor is to hold the price for a minimum of 60 days from the closing date.
- The original complete and unaltered paper Bid Submission documents might be required later.
- Changes, revisions, or alterations made to the Bid Submission documents after sending may result in the Bid Submission being declared non-compliant.
- The Owner reserves the right to review and assess the bids and bidders from all perspectives: capability, capacity, technical, financial, schedule duration, alternatives proposed, etc., and ultimately decide the winner regardless of the lower bid price, and request for bonds if needed.

Stoney Creek Commons Inc.
C/O Westdell Dev. Corp.
1300 Fanshawe Park Rd E, London, ON N5X 3Z8

Addendum #2

Date: May 1, 2024

TENDER ADDENDUM #2

Project Description: Stoney Creek Commons Inc.

Project Address: 1300 Fanshawe Park Rd E, London, ON N5X 3Z8

The following items shall be incorporated as clarifications to the Tender Documents and shall be included, as applicable, in the Stipulated Sum Tender Amount. Acknowledgement of the receipt of this Addendum shall be indicated in the Tender Form. It is the responsibility of the bidder to bring this addendum to the attention of all subcontractors and material suppliers.
Based on RFIs received, and clarifications from consultants, please see below and Attached:

- **Closing Date: 6th of May 2024, 2:00 PM**

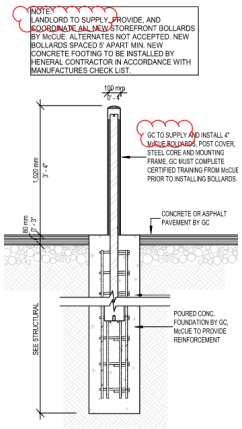
Attached :

1. **RFI responses by Creative Structures and IE Design.**
2. **Off-Site Work by SBM.**
3. **Geotechnical Report by GSPrimo.**

RFI # 16 :

1. Please clarify the supply of the bollards, is it by GC or owner? We have discrepancies in the indications found on drawing A2.1

    - **Supply and installation by GC**



STEEL PIPE BOLLARD - SECTION DETAIL

Stoney Creek Commons Inc.
C/O Westdell Dev. Corp.
1300 Fanshawe Park Rd E, London, ON N5X 3Z8

Addendum #2

RFI #17 Answer:

1. The civil drawings have noted the Heavy duty and Light Duty asphalt design to be the same thickness both to be 40mm of HL3 and 50mm of HL8. But typically it has been light duty to be 40mm HL3 and 50mm HL8 and heavy duty to 50mm HL3 and 60mm HL8. Can you have this confirmed?
    - **SBM Answer: The current pavement structure was taken from EXP Geotechnical Report dated October 2011, however a more recent Geotechnical Report from GSPrimo dated March 20, 2024 (received from Westdell on March 20, 2024) has a revised pavement structure, and our drawings are being updated to the pavement structures as per the snippet below.**

Table 7 – Minimum Pavement Structure Requirements

Pavement layer	Material	Local Road Thickness (mm)	Collector Road Thickness (mm)
Surface Course Asphalt	OPSS H. L3	35	50
Binder Course Asphalt	OPSS H. L8	45	60
Base Layer	OPSS Granular A	150	150
Subbase Layer	OPSS Granular B	350	400

RFI# 18:

1. CRU1C- shows high pressure gas but no indication where the meter bank is. Is that coming of CRU1B meter bank? If yes, you cannot do this as Enbridge wont mix pressures on a meter bank.
2. CRU1B- no sizing for any gas lines
3. CRU1B- show 2 gas lines coming up and capped? Not sure what these gas lines service when the site map shows 1 tenant (food basics). Wouldn't Food basics run their own gas?

    - **The manifold is behind Building 1A, for all the 3 meters to 1A,1B, and 1C**

RFI #19:

1. I've noticed that the assembly for the roof is calling for bonding adhesive for the TPO membrane. For the insulation, can we consider that it is being mechanically fastened?
2. If the insulation is mechanically fastened, we can provide some value engineering on this project. We can get the membrane mechanically fastened as well using an induction welding system. This is a more cost-effective method without any sacrifice to the membrane's performance status. Specially because the plates used to secure the insulation down can be used to secure the membrane and temperature becomes less of a concern as adhesives are temperature sensitive.

3. When the roofing work is expected to happen on this project? We have concerns of it happening during late fall and/or winter. Adhesives are temperature sensitive and there is a risk of having the temperatures below the accepted range of application.
4. We have noticed that there are different manufacturers specified on the roofing assembly. For warranty purposes, we recommend that the vapor barrier manufacturer (currently Soprema), be changed to Elevate/Firestone (TPO's manufacturer). Are you OK for us considering this change?
5. Should the we provide and install drains and stacks, or we should just account for installing and waterproofing them?

    - **The contractor to provide a separate price for the mechanically fastened system, or any other alternatives, it is up to the GC to include the Drains and stacks in any subcontractor scope.**

RFI#20:

1. Dock leveler
   Model HD6835 - Hydraulic Dock Leveler 6 ' Wide x 8 ' Long (nominal) 35,000 Lbs. Capacity - Power Unit: Self-Contained 1.5 Hp 115/1/60 (electrical characteristic to be confirmed)
   https://www.pentalift.com/solutions/hd-series-hydraulic-dock-leveler/
   Bumper: (2) PLVB420AA laminated bumper (4-1/2 x 20 x 7) with two angles (I will see if I can get 20 x 11 x 4.5)

2. Dock Seals
   Model PS100 - Fixed Header Dock Seal c/w Enviro-Green Foam
   https://www.pentalift.com/solutions/ps-100-fixed-header-dock-seals/

    - **Please follow the LLWS for these specifications**

RFI#21:

1. CRU3, CRU5 and CRU7 for V-groove (EIFS Reveals) patterns. Or this is not reveals but shows only the EIFS area for symbol. I didn't see revels from sections. Please let us know.
    - **Refer to RFI responses from Creative Structures**

RFI#22 :

1. I see that the project is calling for a sloped Trench drain and catch basin, however the specifics on this is not mentioned in the drawings or in the specifications .
   Could you please advise what are the requirements so that we can provide a quote of the appropriate product ?

    - **Please follow the LLWS for these specifications**

Stoney Creek Commons Inc.
C/O Westdell Dev. Corp.
1300 Fanshawe Park Rd E, London, ON N5X 3Z8

Addendum #2

RFI#23:

1. #1: The roof insulation is min R-35. Is it one or two layers?
   If it is two layers what is the thickness of each layer?

   - **Follow Manufacturer recommendations for the R-35 , do not consider tampered insulation**

RFI#24:

1. For Bldg 1 & 3, which have connecting units that aren't in our scope, how are we to finish the demising walls between the units? Should the demising wait until the entire building is constructed, as there will be drywall that is exposed to the elements.

   - **Refer to RFI responses from Creative Structures**

RFI#25:

1. For the subject project, RFI #7 is asking for an exterior automatic sliding door and interior swing doors for Shopper's Drug Mart vestibule. It is not possible to give an automatic sliding door with the current vestibule elevations. Could you please give the updated elevation drawings or advice how to proceed.

   - **Consider Sliding Door in pricing, details to be addressed later**

END OF ADDENDUM #2

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 8

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 25, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRU 1B
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 19-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 19, 2024, and received April 19, 2024, we have reviewed item 8th. Please see the responses below:

1. ***Forward a question regarding the foundation piers. Can you confirm if the piers are gonna be the same width as the walls as shown on the structural drawings? Or will they be bumped out 1" as indicated on the schedule. Can you confirm please?***
   - The foundation piers must have the dimension shown in the schedule. Specifically on columns with piers shown on the floor plan, only where bracing and RWL column exists.

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 9

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 26, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRU 3
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 19-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 19, 2024, and received April 19, 2024, we have reviewed item 9th. Please see the responses below:

1. ***CRU-3 Unit A is listed as out of scope. Is this to be done by others or under separate contract? Are we to include for the exterior finishes as per the elevations or stop at the demising wall and erect a temporary siding to be removed when unit A is constructed? There is no clear delineation especially on the roof.***

    - Client to confirm, including timing of construction.

    WD: Mcdonalds will be constructed after CRU 3 wall is up, no need ton consder outside finish

2. ***Detailed EIFS finishes - Several of the buildings show an intricate EIFS finish (stacked block look) which is very difficult/labour intensive. Is the intent to use a panelized system or field apply all the reveals? Does the pattern have to match the drawings exactly or similar will be approved with mock-up?***

    - Allow for Dryvit or approved finish. Client to review and confirm.

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 10

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 26, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRU 1B
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 22-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 21, 2024, and received April 22, 2024, we have reviewed item 1. Please see the responses below:

1. ***Forward Question regarding Shopper Drug Mart interior vestibule glazing. Dwg A-2.1B shows Rockglass requirement. Also, Dwg A-6.0 shows sealed unit rockglass in curtain wall. Please confirm if sealed units with Low-E as mentioned on drawings are required for interior vestibule or should we provide 6mm clear temp only?***

- Screen types S1 and S2; "GLAZING – 6mm CREAL TEMPERED SOLAR 74 LOW 'E' GLASS."

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
cs@creativestr.ca

Request for Information

RFI Number 11

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 26, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRUs
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 22-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 22, 2024, and received April 22, 2024, we have reviewed item 1 TO 8. Please see the responses below:

1.Please confirm if the Owner obtained the building permit or when building permit approval will be expected.
- Client to confirm.

WD: Building permis are submitted and currently under review, ETA of approval End of May 2024

2.Please provide a Geotechnical report.
- Geotechnical Report #2382, March 20, 2024. Is attached to this RFI.

WD: Included in Addendum # 1

3.Please provide Environmental Site Assessments Phase I and Phase II. Please confirm that the soil meets Table 1 MOE requirements.
- Client to provide ESA Report

WD: Attached Phase 2 report

4.Please provide specifications for exterior stone for retaining walls. For example, in drawing S3.0 and S3.1. for Building C.
- Please clarify the question. Structural drawings for Building C do not show a retaining wall in sheets S3.0 and S3.1.

5. How to finish the exterior of the concrete block wall between the new building and the future building? For example, the north wall between buildings CRU3A and 3B.
- Design intent is for CRU 3A and CRU 3B to be constructed at the same time. Client to confirm.

WD: Mcdonalds will be constructed after CRU 3 wall is up, no need ton consder outside finish

6.When Unit CRU 3A (McDonalds) will be constructed?
- Client to confirm.

WD: Mcdonalds will be constructed after CRU 3 wall is up, no need ton consder outside finish

7.Please provide the wall type between units CRU1A and 1B. Who is responsible for erecting this wall? It is by contractor for 1A (Food Basics) or by contractor for 1B?
- Refer to Section 5, A-4.2; the demising partition is part of the scope of this project.

WD: Contractor to provide separate price for this wall

8.When Unit 1A (Food Basics) will be constructed?
- Client to confirm.

WD: the GC for our project will prepare the pad for Metro, start work on 1B, Contractor for 1A should erect the buildign within 3 months from possession.

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

SEPARATE PRICES REQUIRED FOR BUILDS 1A (METRO):

SEPARATE PRICE #1: Exterior Sidewalks, Bollards & Flush curb Front concrete sidewalk including front & back bollards, concrete pad at the gas meter (including any bollards or protection rail), and tactile strip.

SEPARATE PRICING #2:Loading dock pad and Compactor Pad
All provisions for loading concrete pad including associated below-grade plumbing work such as; trench drain, and all associated piping as well as compactor pad provisions for garbage compactor including associated below-grade plumbing work such as; catch basin and all associated piping

SEPARATE PRICING #3: Retaining Wall & Railing at the loading area
All provisions for retaining wall including but not limited to the foundation wall and the railing.

SEPARATE PRICING #4 : incoming electrical service under the loading dock area
All provision of 1x4 concrete encased duct bank and conduit running underneath the loading dock for the building power as well as the provision of 1x 2 concrete encased ducts and conduit for communication as per extent shown on our tender dwgs.

SEPARATE PRICES REQUIRED FOR BUILDS 1B (Shoppers):

ITEMIZED PRICE #1: Shared demising wall footing
All provisions for shared demising wall footing including but not limited to associated sub-grade and concrete reinforcement.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 12

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 26, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRUs
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 22-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 22, 2024, and received April 22, 2024, we have reviewed item 1. Please see the responses below:

1. Can you confirm roofing spec. Is the TPO to be mechanically fastened or fully adhered?

- Mechanically fasten or adhere roof insulation in accordance with the roof insulation manufacturer's recommendations for the zone and must provide wind uplift resistance testing reports; adhere the TPO roof membrane system using a bonding adhesive.

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 13

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 25, 2023
VIA EMAIL

Project: 1300 Fanshawe – CRUs
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 22-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 22, 2024, and received April 22, 2024, we have reviewed item 1. Please see the responses below:

1) ***Is there an available Geotechnical Report for this site?***
   - Geotechnical Report #2382, March 20, 2024. Is attached to this RFI.

2) ***CRU #1 – Unit B***
   a) ***Refer to drawing A-3.1: Material Legend: E1 Concrete Block Masonry Veneer: "Provide Reinforced Concrete Block At"……: the rest of the description has been overwritten. Please advise.***
      - Provide reinforced concrete block wall at the loading dock area.

   b) ***The line after "Warranty Period By Owner" has also been overwritten. Please advise.***
      - Colour – Natural Finish

   c) ***Refer to drawing A-3.2: Material Legend: E1 Concrete Block Masonry Veneer: "Provide Reinforced Concrete Block At"……: the rest of the description has been overwritten. Please advise.***
      - Provide reinforced concrete block wall at loading dock area.

   d) ***The line after "Warranty Period By Owner" has also been overwritten. Please advise.***
      - Colour - Natural Finish

3) ***CRU #1 – Unit C***
   a) ***Refer to drawing A-3.1:***
      i) ***Material Legend: E1 Stone Veneer: Please advise which finish: Tapestry, Smooth, Tex, or Rock. RFI***
         - Allow for a Tapestry stone block finish.

4) ***CRU #5***
   a) ***Refer to drawing A-3.1:***
      i) ***Material Legend: EW1 & EW5 Stone Block: Please advise which finish: Tapestry, Smooth, Tex, or Rock.***
         - Allow for a Tapestry stone block finish.

      ii) ***Material Legend: EW5 Stone Block: Tag EW5 does not appear on any of the elevations: Wondering if it should be:***

(1) North Elevation, between column lines 1 & 1.1
- Correct.

(2) East Elevation, between column lines A2 & A7
- Correct.

iii) South elevation: section 3/A-4.1 does not match drawing A-4.1
- Refer to floor plan for section location.

iv) East elevation: section 4/A-4.1 does not match drawing A-4.1. R
- Refer to floor plan for section location.

v) East elevation: sections 1 & 2/A-4.2 do not match drawing A-4.2.
- Refer to floor plan for section location.

vi) West elevation: section 4/A4.1 does not match drawing A-4.1.
- Refer to floor plan for section location.

vii) West elevation: sections 2 & 3/A-4.2 do not match drawing A-4.2.
- Refer to floor plan for section location.

5) CRU #6

a) Refer to drawing A-3.1:

i) Material Legend: EW1 & EW2 Stone Block: Please advise which finish: Tapestry, Smooth, Tex, or Rock.
- Allow for a Tapestry stone block finish.

ii) West elevation: section 1/A-4.1 does not match A-4.1.
- Refer to floor plan for section location.

b) Refer to drawing A-3.2:

i) Material Legend: EW1 & EW2 Stone Block: Please advise which finish: Tapestry, Smooth, Tex, or Rock. RFI
- Allow for a Tapestry stone block finish.

6) CRU #7

a) Refer to drawing A-3.1:

i) Material Legend: EW1 Stone Block: Please advise which finish: Tapestry, Smooth, Tex, or Rock.
- Allow for a Tapestry stone block finish.

ii) North elevation: section 2/A-4.2 does not match A-4.2. 4.2 Section 5
- Refer to floor plan for section location.

iii) South elevation: section 3/A-4.1 does not match A-4.1
- Refer to floor plan for section location.

iv) West elevation: section 3/A-4.2 does not match A-4.2.
- Refer to floor plan for section location.

b) Refer to drawings A3.0 and A3.1: Material legend: Finish:

i) Melville Norman Brick: size 10 x 3 1/8. Melville Norman Brick is 3 1/2 x 2 1/4 x 11 7/16 (in).
- Melville Norman Brick is not included in CRU 7 elevations.

ii) Architectural Concrete Block Veneer: 18”L x 7.5”H x 3.5”D. Product is either 16”L or 24”L.
- Allow for 16” L or 24” L.

3A - 1701 RICHMOND STREET
LONDON ON N5X 3Y2
CANADA
P: +1 (519) 878-5488
CS@creativestr.ca

Request for Information

RFI Number 14

Westdell Development Corp.
1701 Richmond St Unit 3B,
London, ON N5X 3Y2

CS 2023-102
April 25, 2023
VIA EMAIL

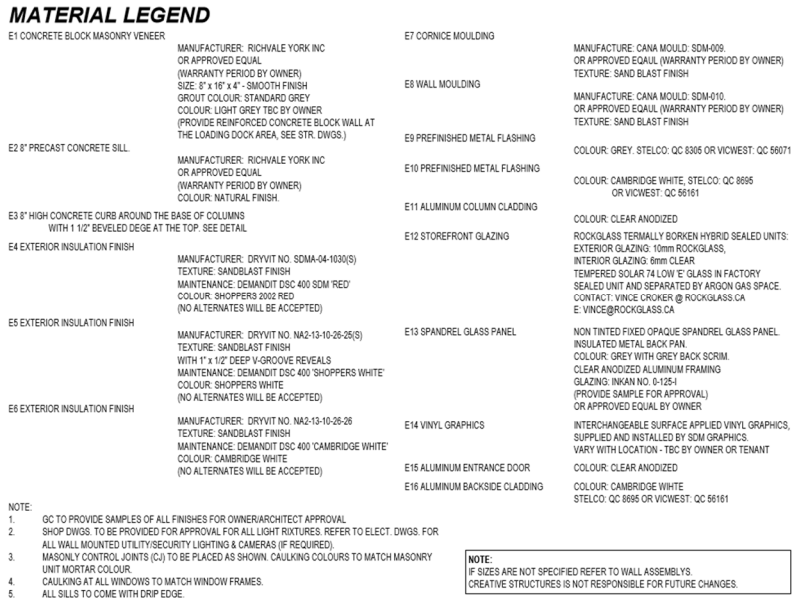
Project: 1300 Fanshawe – CRUs
Address: 1300 FANSHAWE PARK RD. EAST. LONDON, ON.
Building Permit:
RFI Received: April, 22-2024
Attn.: Khaled Mahmoud.

Dear Khaled.:

In response to your Request for Information, dated April 22, 2024, and received April 22, 2024, we have reviewed item 1 to 6. Please see the responses below:

1) ***SHOPPERS DRUG MART (CRU#1 UNIT - B)***
   a) ***legend texts are overlapping all through the legend chart. However, the image attached shows the finish type for precast concrete sill is unclear due to overlapping text. Please clarify.***

- Response: Refer to revised sheet A-3.1 & 3.2. Material Legend has updated.



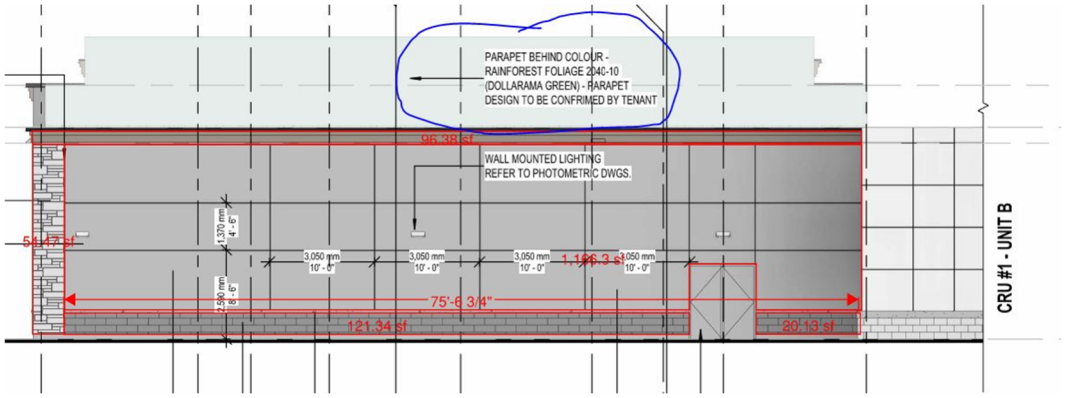
MATERIAL LEGEND

E1 CONCRETE BLOCK MASONRY VENEER	MANUFACTURER: RICHVALE YORK INC OR APPROVED EQUAL (WARRANTY PERIOD BY OWNER) SIZE: 8" x 16" x 4" - SMOOTH FINISH GROUT COLOUR: STANDARD GREY COLOUR: LIGHT GREY TBC BY OWNER. (PROVIDE REINFORCED CONCRETE BLOCK WALL AT THE LOADING DOCK AREA, SEE STR. DWGS.)
E2 8" PRECAST CONCRETE SILL.	MANUFACTURER: RICHVALE YORK INC OR APPROVED EQUAL (WARRANTY PERIOD BY OWNER) COLOUR: NATURAL FINISH.
E3 8" HIGH CONCRETE CURB AROUND THE BASE OF COLUMNS WITH 1 1/2" BEVELED DEGE AT THE TOP. SEE DETAIL	
E4 EXTERIOR INSULATION FINISH	MANUFACTURER: DRYVIT NO. SDMA-04-1030(S) TEXTURE: SANDBLAST FINISH MAINTENANCE: DEMANDIT DSC 400 SDM 'RED' COLOUR: SHOPPER'S 2002 RED (NO ALTERNATES WILL BE ACCEPTED)
E5 EXTERIOR INSULATION FINISH	MANUFACTURER: DRYVIT NO. NA2-13-10-26-25(S) TEXTURE: SANDBLAST FINISH WITH 1" x 1/2" DEEP V-GROOVE REVEALS MAINTENANCE: DEMANDIT DSC 400 'SHOPPERS WHITE' COLOUR: SHOPPERS WHITE (NO ALTERNATES WILL BE ACCEPTED)
E6 EXTERIOR INSULATION FINISH	MANUFACTURER: DRYVIT NO. NA2-13-10-26-26 TEXTURE: SANDBLAST FINISH MAINTENANCE: DEMANDIT DSC 400 'CAMBRIDGE WHITE' COLOUR: CAMBRIDGE WHITE (NO ALTERNATES WILL BE ACCEPTED)
E7 CORNICE MOULDING	MANUFACTURE: CANA MOULD: SDM-009. OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER) TEXTURE: SAND BLAST FINISH
E8 WALL MOULDING	MANUFACTURE: CANA MOULD: SDM-010. OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER) TEXTURE: SAND BLAST FINISH
E9 PREFINISHED METAL FLASHING	COLOUR: GREY. STELCO: QC 8305 OR VICWEST: QC 56071
E10 PREFINISHED METAL FLASHING	COLOUR: CAMBRIDGE WHITE, STELCO: QC 8695 OR VICWEST: QC 56161
E11 ALUMINUM COLUMN CLADDING	COLOUR: CLEAR ANODIZED
E12 STOREFRONT GLAZING	ROCKGLASS TERMALLY BORKEN HYBRID SEALED UNITS: EXTERIOR GLAZING: 10mm ROCKGLASS, INTERIOR GLAZING: 6mm CLEAR TEMPERED SOLAR 74 LOW 'E' GLASS IN FACTORY SEALED UNIT AND SEPARATED BY ARGON GAS SPACE. CONTACT: VINCE CROKER @ ROCKGLASS.CA E: VINCE@ROCKGLASS.CA
E13 SPANDREL GLASS PANEL	NON TINTED FIXED OPAQUE SPANDREL GLASS PANEL. INSULATED METAL BACK PAN. COLOUR: GREY WITH GREY BACK SCRIM. CLEAR ANODIZED ALUMINUM FRAMING GLAZING: INKAN NO. 0-125-I (PROVIDE SAMPLE FOR APPROVAL) OR APPROVED EQUAL BY OWNER
E14 VINYL GRAPHICS	INTERCHANGEABLE SURFACE APPLIED VINYL GRAPHICS, SUPPLIED AND INSTALLED BY SDM GRAPHICS. VARY WITH LOCATION - TBC BY OWNER OR TENANT
E15 ALUMINUM ENTRANCE DOOR	COLOUR: CLEAR ANODIZED
E16 ALUMINUM BACKSIDE CLADDING	COLOUR: CAMBRIDGE WHITE STELCO: QC 8695 OR VICWEST: QC 56161

NOTE:
1. GC TO PROVIDE SAMPLES OF ALL FINISHES FOR OWNER/ARCHITECT APPROVAL
2. SHOP DWGS. TO BE PROVIDED FOR APPROVAL FOR ALL LIGHT RIXTURES. REFER TO ELECT. DWGS. FOR ALL WALL MOUNTED UTILITY/SECURITY LIGHTING & CAMERAS (IF REQUIRED).
3. MASONLY CONTROL JOINTS (CJ) TO BE PLACED AS SHOWN. CAULKING COLOURS TO MATCH MASONRY UNIT MORTAR COLOUR.
4. CAULKING AT ALL WINDOWS TO MATCH WINDOW FRAMES.
5. ALL SILLS TO COME WITH DRIP EDGE.

NOTE:
IF SIZES ARE NOT SPECIFIED REFER TO WALL ASSEMBLYS.
CREATIVE STRUCTURES IS NOT RESPONSIBLE FOR FUTURE CHANGES.

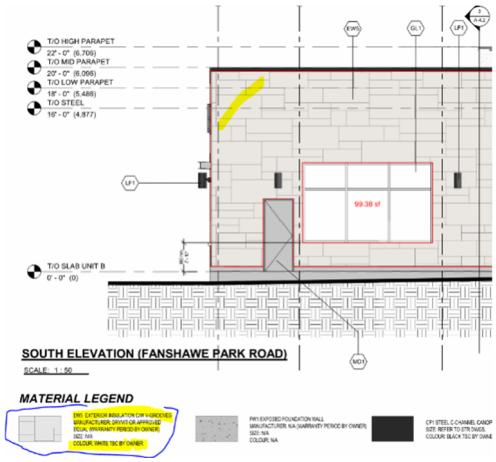
2) ***DOLLARAMA - (CRU#1 UNIT - C)***
   a) ***the attach shows the paint to be done behind parapet, please confirm if it should be taken in consideration for pricing, if yes, then is it just the finish coat?***



- Response: Tenant to confirm. Storefront is to include a parapet of not less than 50 feet in width and 6 feet in height with necessary access for electrical signage connections for the Tenant's signage. The parapet behind the Tenant's sign shall be painted or otherwise colored Benjamin Moore - Rainforest Foliage 2040-10 (Dollarama Green). The parapet shall be subject to the Tenant's prior approval.

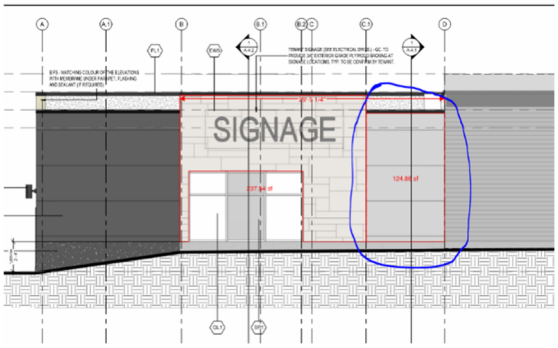
3) CRU #3 (UNIT - B))

a) elevation shows discrepancies with materials, legend mentions EIFS, but hatch shows stone veneer. Confirm the material.



- Response: Indicated material is EIFS. Contractor to provide alternative pattern. Client to review and confirm.

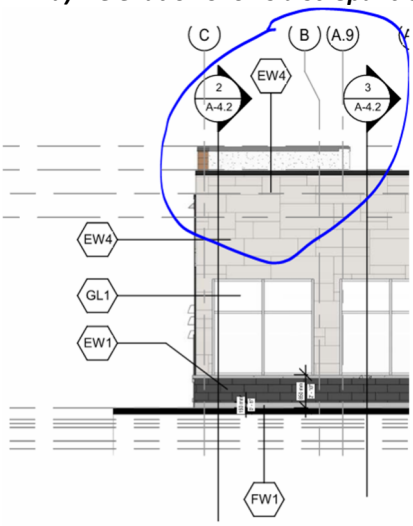
b) hatch missing on the marked area, which material to consider?



- Response: The material to be considered in marked area is EW7.

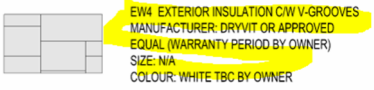
4) CRU #5

a) elevation shows discrepancies with materials, legend mentions EIFS. Confirm the material.



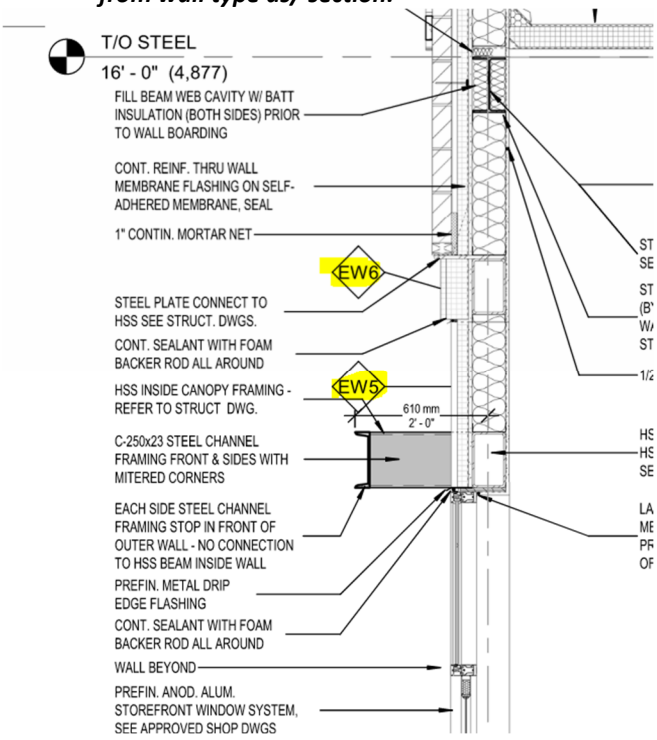
EAST ELEVATION

SCALE: 1 : 100



- Response: Indicated material is EIFS. Contractor to provide alternative pattern. Client to review and confirm.

b) Need clarification on material on the basis of wall assembly and elevation because material shown is different from wall type as/ section.

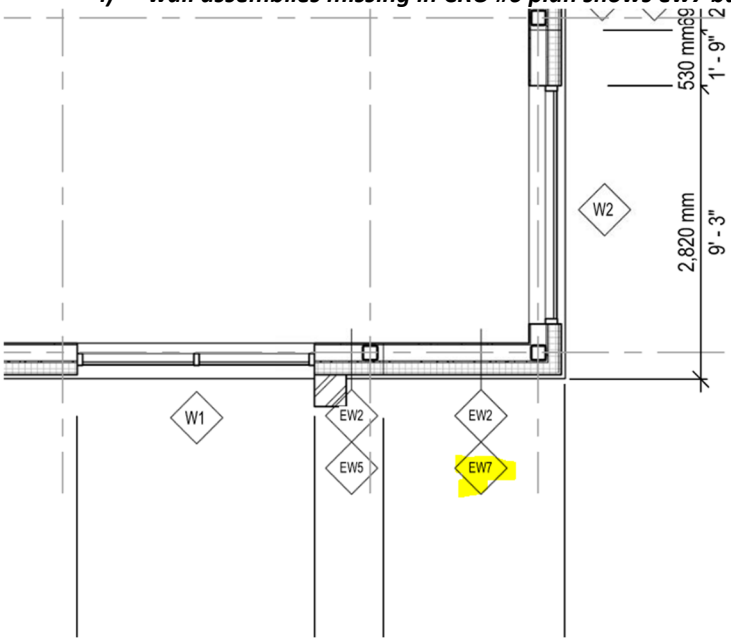


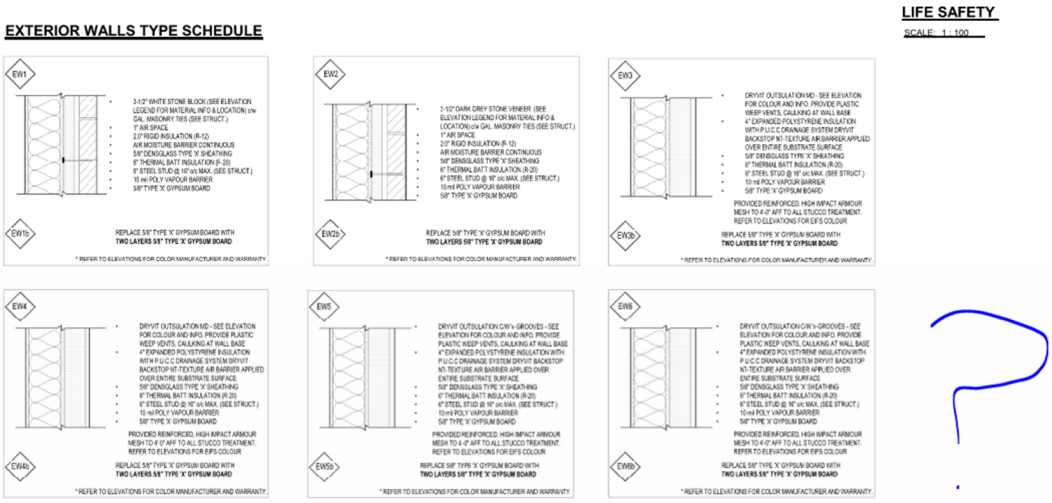
- <u>Response:</u> Material showed on section 3, marked as EW5 to be EW2. Please refer to Sheet A-4.1.

5) CRU #6

a) Missing wall assembly

i) wall assemblies missing in CRU #6 plan shows ew7 but not shown in wall assembly.

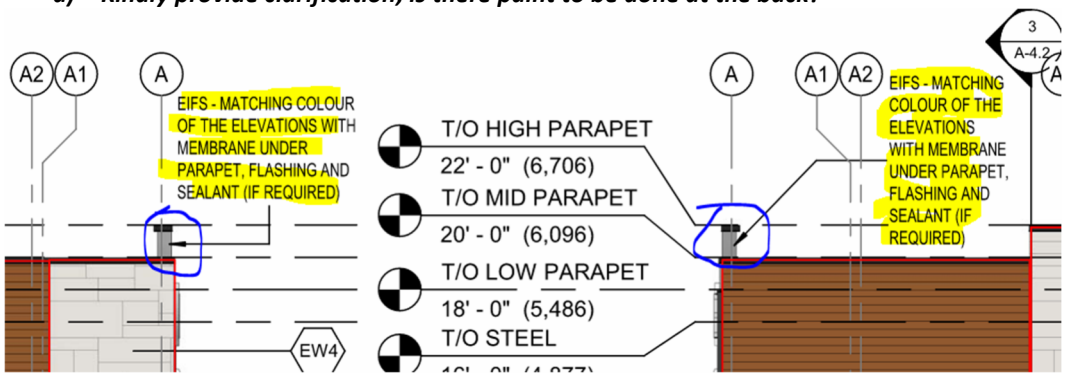




- Response: Incorrect Wall tag. EW7 to be EW6. Please refer to Sheet A-2.2.

6) CRU #7

a) Kindly provide clarification, is there paint to be done at the back?



- Response: Provide EIFS matching colour of the front elevation on side of parapet for consistency. back side to maintain without paint.

b) is the back of the parapet to be painted in each unit or just the exposed sides? and if yes then is it the same as eifs finish coat?

- Response: Provide EIFS matching colour of the front elevation on side of parapet for consistency. back side to maintain without paint.

c) Update for new addenda & RFI closing.

- Response: Client to confirm.

d) what will be the standard size for precast stone sill. Moreover, precast stone sill hatch makes it look like concrete. Please clarify if concrete or stone.

- Response: Shouldice Stone, 3 ½" thickness precast stone sill. Contractor to provide alternative option and Client to confirm.

e) Will they extend the deadline?

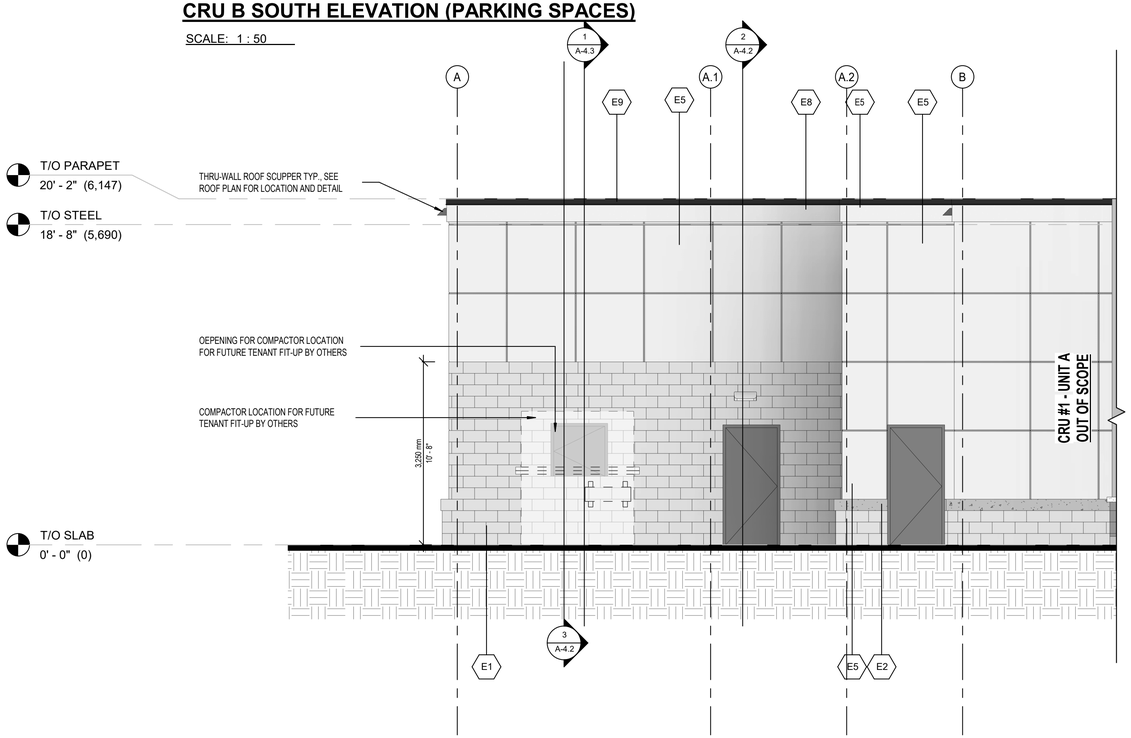
- Response: Client to confirm.

We trust this report meets your satisfaction, if you need further clarification, please do not hesitate to contact us.

Respectfully Submitted,
Creative Structures Ltd.

CRU B SOUTH ELEVATION (PARKING SPACES)

SCALE: 1 : 50



WEST ELEVATION

SCALE: 1 : 50

MATERIAL LEGEND

E1 CONCRETE BLOCK MASONRY VENEER
MANUFACTURER: RICHVALE YORK INC
OR APPROVED EQUAL
(WARRANTY PERIOD BY OWNER)
SIZE: 8" x 16" x 4" - SMOOTH FINISH
GROUT COLOUR: STANDARD GREY
COLOUR: LIGHT GREY TBC BY OWNER
(PROVIDE REINFORCED CONCRETE BLOCK WALL AT THE LOADING DOCK AREA, SEE STR. DWGS.)

E2 8" PRECAST CONCRETE SILL.
MANUFACTURER: RICHVALE YORK INC
OR APPROVED EQUAL
(WARRANTY PERIOD BY OWNER)
COLOUR: NATURAL FINISH.

E3 8" HIGH CONCRETE CURB AROUND THE BASE OF COLUMNS WITH 1 1/2" BEVELED DEGE AT THE TOP. SEE DETAIL

E4 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. SDMA-04-1030(S)
TEXTURE: SANDBLAST FINISH
MAINTENANCE: DEMANDIT DSC 400 SDM 'RED'
COLOUR: SHOPPERS 2002 RED
(NO ALTERNATES WILL BE ACCEPTED)

E5 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. NA2-13-10-26-25(S)
TEXTURE: SANDBLAST FINISH
WITH 1" x 1/2" DEEP V-GROOVE REVEALS
MAINTENANCE: DEMANDIT DSC 400 'SHOPPERS WHITE'
COLOUR: SHOPPERS WHITE
(NO ALTERNATES WILL BE ACCEPTED)

E6 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. NA2-13-10-26-26
TEXTURE: SANDBLAST FINISH
MAINTENANCE: DEMANDIT DSC 400 'CAMBRIDGE WHITE'
COLOUR: CAMBRIDGE WHITE
(NO ALTERNATES WILL BE ACCEPTED)

E7 CORNICE MOULDING
MANUFACTURE: CANA MOULD: SDM-009.
OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER)
TEXTURE: SAND BLAST FINISH

E8 WALL MOULDING
MANUFACTURE: CANA MOULD: SDM-010.
OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER)
TEXTURE: SAND BLAST FINISH

E9 PREFINISHED METAL FLASHING
COLOUR: GREY. STELCO: QC 8305 OR VICWEST: QC 56071

E10 PREFINISHED METAL FLASHING
COLOUR: CAMBRIDGE WHITE, STELCO: QC 8695
OR VICWEST: QC 56161

E11 ALUMINUM COLUMN CLADDING
COLOUR: CLEAR ANODIZED

E12 STOREFRONT GLAZING
ROCKGLASS TERMALLY BORKEN HYBRID SEALED UNITS:
EXTERIOR GLAZING: 10mm ROCKGLASS,
INTERIOR GLAZING: 6mm CLEAR
TEMPERED SOLAR 74 LOW 'E' GLASS IN FACTORY
SEALED UNIT AND SEPARATED BY ARGON GAS SPACE.
CONTACT: VINCE CROKER @ ROCKGLASS.CA
E: VINCE@ROCKGLASS.CA

E13 SPANDREL GLASS PANEL
NON TINTED FIXED OPAQUE SPANDREL GLASS PANEL.
INSULATED METAL BACK PAN.
COLOUR: GREY WITH GREY BACK SCRIM.
CLEAR ANODIZED ALUMINUM FRAMING
GLAZING: INKAN NO. 0-125-I
(PROVIDE SAMPLE FOR APPROVAL)
OR APPROVED EQUAL BY OWNER

E14 VINYL GRAPHICS
INTERCHANGEABLE SURFACE APPLIED VINYL GRAPHICS, SUPPLIED AND INSTALLED BY SDM GRAPHICS.
VARY WITH LOCATION - TBC BY OWNER OR TENANT

E15 ALUMINUM ENTRANCE DOOR
COLOUR: CLEAR ANODIZED

E16 ALUMINUM BACKSIDE CLADDING
COLOUR: CAMBRIDGE WIHTE
STELCO: QC 8695 OR VICWEST: QC 56161

NOTE:
1. GC TO PROVIDE SAMPLES OF ALL FINISHES FOR OWNER/ARCHITECT APPROVAL
2. SHOP DWGS. TO BE PROVIDED FOR APPROVAL FOR ALL LIGHT RIXTURES. REFER TO ELECT. DWGS. FOR ALL WALL MOUNTED UTILITY/SECURITY LIGHTING & CAMERAS (IF REQUIRED).
3. MASONLY CONTROL JOINTS (CJ) TO BE PLACED AS SHOWN. CAULKING COLOURS TO MATCH MASONRY UNIT MORTAR COLOUR.
4. CAULKING AT ALL WINDOWS TO MATCH WINDOW FRAMES.
5. ALL SILLS TO COME WITH DRIP EDGE.

NOTE:
IF SIZES ARE NOT SPECIFIED REFER TO WALL ASSEMBLYS.
CREATIVE STRUCTURES IS NOT RESPONSIBLE FOR FUTURE CHANGES.

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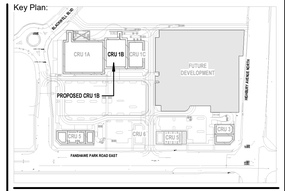
2. THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS PROVIDED BY AND IS THE PROPERTY OF CREATIVE STRUCTURE.
3. THE CONTRACTOR MUST VERIFY AND ACCEPT REPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS ON SITE AND MUST NOTIFY CREATIVE STRUCTURE OF ANY VARIATION FROM THE SUPPLIED INFORMATION.
4. THIS DISCIPLINE IS NOT RESPONSIBLE FOR THE ACCURACY OF SURVEY, AND THE OTHER DISCIPLINES INFORMATION SHOWN ON THIS DRAWING. REFER TO THE APPROPRIATE CONSULTATN'S DRAWINGS BEFORE PROCEEDING WITH THE WORK.
5. CONSTRUCTION MUST CONFORM TO ALL APPLICABLE CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
6. THE CONTRACTOR WORKING FROM DRAWINGS NOT SPECIFICALLY MARKED 'FOR CONSTRUCTION' MUST ASSUME FULL REPONSIBILITY AND BEAR COSTS FOR ANY CORRECTIONS OR DAMAGES RESULTING FROM HIS WORK.

Key Plan:



Consultant:

CREATIVE STRUCTURES

CS@CREATIVESTR.CA

Consultant:

NGACAKU ARCHITECTURE INC

Seal: North Arrow:

General Notes:

IT IS THE RESPONSIBILITY OF THE OWNER, GENERAL AND/OR TENANT CONTRACTOR AND ALL SUB-TRADES TO BE FAMILIAR WITH THE PROJECT AS A WHOLE. ALL DISCREPANCIES AND DIMENSIONAL ERRORS ON THE PLANS AND RELATED DOCUMENTS MUST BE REPORTED TO CREATIVE STRUCTURES (CS) AND NGACAKU ARCHITECTURE INC. (NAI) PRIOR TO COMMENCING ANY WORK.

DO NOT SCALE DRAWING. 'FOR CONSTRUCTION DRAWINGS' MUST HAVE ORIGINAL CONSULTANTS STAMP AND SIGNATURE. ALL CONSTRUCTION AND MATERIALS MUST CONFORM WITH APPLICABLE CODES AND C.M.H.C. STANDARDS AND BE APPROVED BY OWNER

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THESE DRAWINGS AND ALL DETAILS ARE FOR THIS PROJECT ONLY AND SHOULD NOT BE USED FOR ANY OTHER WORK.

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND / OR OMISSIONS TO CREATIVE STRUCTURES LTD. AND NGACAKU ARCHITECTURE INC. PRIOR TO COMMENCING WORK. ALL DIMENSIONS AND LEVELS ARE APPROXIMATE AND SHOULD BE CONFIRMED BY OWNER AND GENERAL CONTRACTOR PRIOR CONSTRUCTION.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT BUILDING CODE REGULATIONS AND BYLAWS HAVING JURISDICTION.

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT HAS BEEN STAMPED BY CREATIVE STRUCTURES LTD. OR NGACAKU ARCHITECTURE INC. (N'AI) AND A BUILDING PERMIT HAS BEEN ISSUED AND MARKED "ISSUED FOR CONSTRUCTION". THE DRAWINGS SHALL NOT BE USED FOR PRICING, COSTING, OR TENDER UNLESS INDICATED IN THE REVISION COLUMN AND THESE DRAWINGS ARE NOT COMPLETE AND ANY PRICES BASED ON THESE DRAWINGS MUST INCLUDE ALLOWANCES FOR THIS WITH NO LIABILITY ON CREATIVE STRUCTURES LTD AND NGACAKU ARCHITECTURE INC.

CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE.

CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION.

ANY MATERIAL ALTERATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALL. FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS AFFECTED.

No.	Date	Revision
6	Apr 30, 2024	RFI-14
5	APR 23, 2024	ISSUED FOR PERMIT
4	APR 02, 2024	ISSUED FOR TENDER
3	MAR 30, 2024	ISSUED FOR COORDINATION
2	FEB 08, 2024	ISSUED FOR CLIENT REVIEW
1	FEB 06, 2024	60% ISSUED FOR CLIENT REVIEW

ISSUES/REVISION TABLE

Project:

WESTDELL DEVELOPMENT CORP

1300 FANSHAWE PARK ROAD. EAST. - CRU #1-UNIT B

1300 FANSHAWE PARK ROAD. EAST. LONDON. ON.

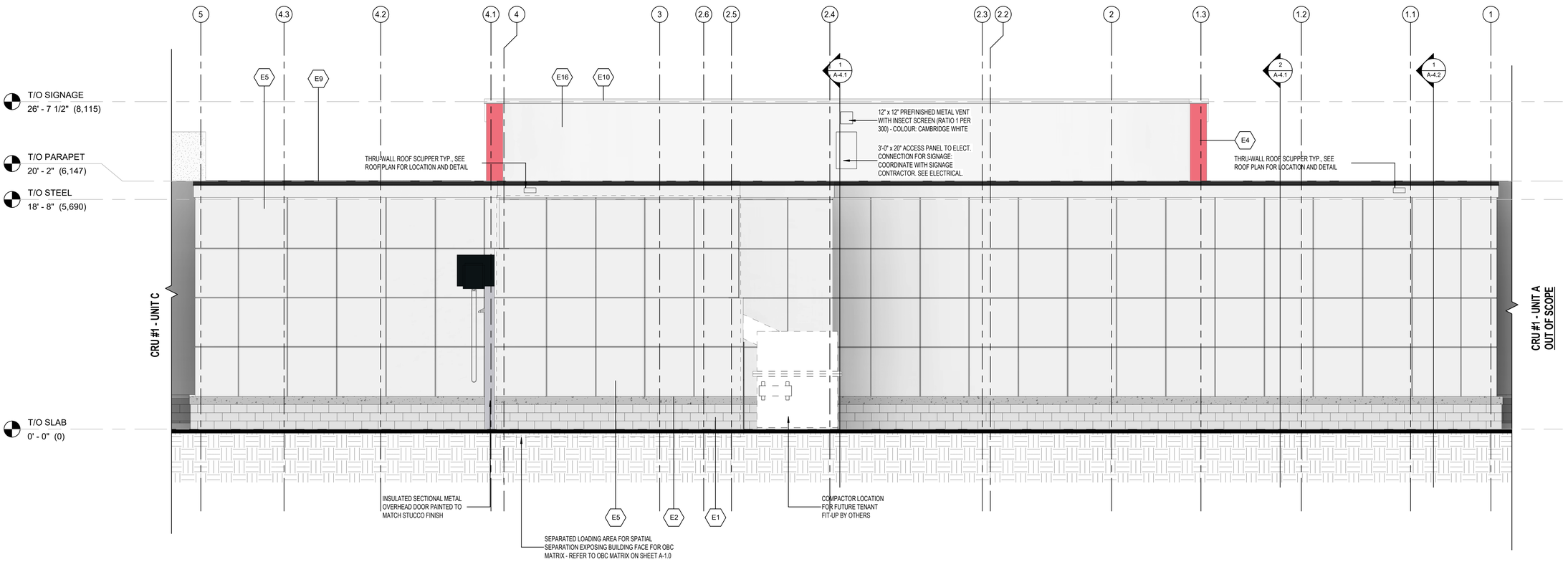
Drawing Title:

ELEVATIONS I

Drawn By:	D.H.	Scale:	AS INDICATED
Checked By:	K.N.	Plot Date:	APR 23, 2024
Project Date:	JAN 2024		
Project No:	2023-102		

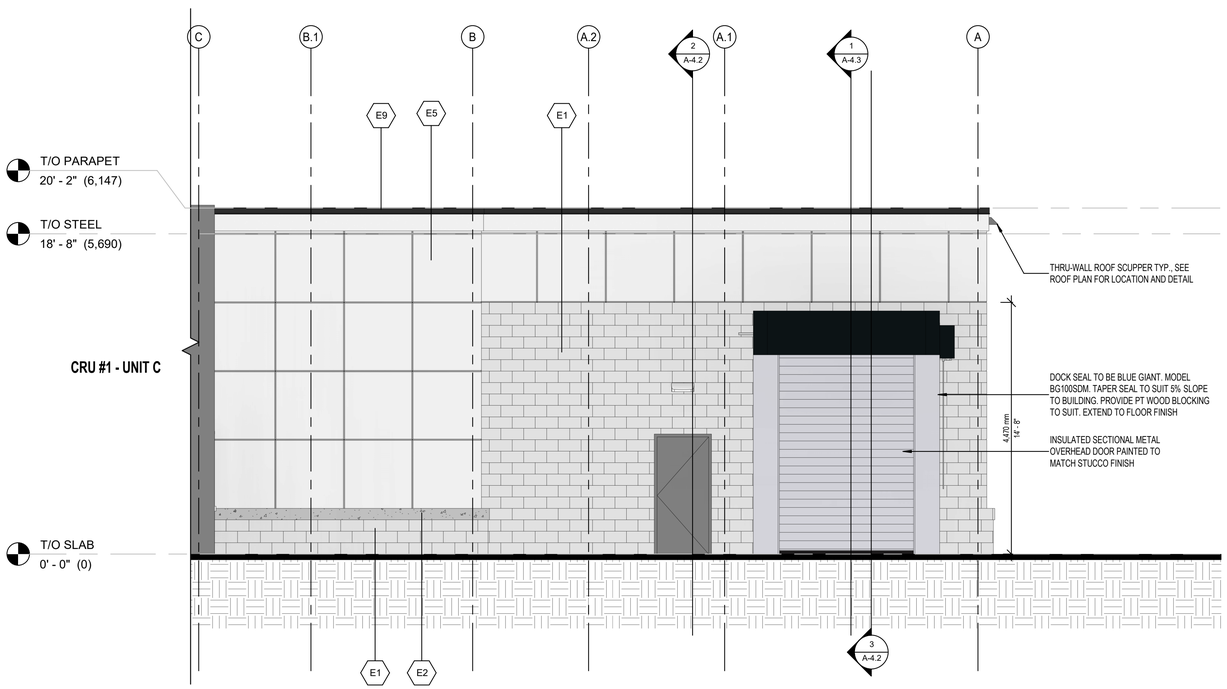
Drawing No: A-3.1

Revision: 6



CRU B NORTH ELEVATION (LOADING DECK SIDE)

SCALE: 1 : 50



EAST ELEVATION (LOADING DECK AREA)

SCALE: 1 : 50

MATERIAL LEGEND

E1 CONCRETE BLOCK MASONRY VENEER
MANUFACTURER: RICHVALE YORK INC
OR APPROVED EQUAL
(WARRANTY PERIOD BY OWNER)
SIZE: 8" x 16" x 4" - SMOOTH FINISH
GROUT COLOUR: STANDARD GREY
COLOUR: LIGHT GREY TBC BY OWNER
(PROVIDE REINFORCED CONCRETE BLOCK WALL AT THE LOADING DOCK AREA, SEE STR. DWGS.)

E2 8" PRECAST CONCRETE SILL.
MANUFACTURER: RICHVALE YORK INC
OR APPROVED EQUAL
(WARRANTY PERIOD BY OWNER)
COLOUR: NATURAL FINISH.

E3 8" HIGH CONCRETE CURB AROUND THE BASE OF COLUMNS WITH 1 1/2" BEVELED DEGE AT THE TOP. SEE DETAIL

E4 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. SDMA-04-1030(S)
TEXTURE: SANDBLAST FINISH
MAINTENANCE: DEMANDIT DSC 400 SDM 'RED'
COLOUR: SHOPPERS 2002 RED
(NO ALTERNATES WILL BE ACCEPTED)

E5 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. NA2-13-10-26-25(S)
TEXTURE: SANDBLAST FINISH
WITH 1" x 1/2" DEEP V-GROOVE REVEALS
MAINTENANCE: DEMANDIT DSC 400 'SHOPPERS WHITE'
COLOUR: SHOPPERS WHITE
(NO ALTERNATES WILL BE ACCEPTED)

E6 EXTERIOR INSULATION FINISH
MANUFACTURER: DRYVIT NO. NA2-13-10-26-26
TEXTURE: SANDBLAST FINISH
MAINTENANCE: DEMANDIT DSC 400 'CAMBRIDGE WHITE'
COLOUR: CAMBRIDGE WHITE
(NO ALTERNATES WILL BE ACCEPTED)

E7 CORNICE MOULDING
MANUFACTURE: CANA MOULD: SDM-009.
OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER)
TEXTURE: SAND BLAST FINISH

E8 WALL MOULDING
MANUFACTURE: CANA MOULD: SDM-010.
OR APPROVED EQAUL (WARRANTY PERIOD BY OWNER)
TEXTURE: SAND BLAST FINISH

E9 PREFINISHED METAL FLASHING
COLOUR: GREY. STELCO: QC 8305 OR VICWEST: QC 56071

E10 PREFINISHED METAL FLASHING
COLOUR: CAMBRIDGE WHITE, STELCO: QC 8695
OR VICWEST: QC 56161

E11 ALUMINUM COLUMN CLADDING
COLOUR: CLEAR ANODIZED

E12 STOREFRONT GLAZING
ROCKGLASS TERMALLY BORKEN HYBRID SEALED UNITS:
EXTERIOR GLAZING: 10mm ROCKGLASS,
INTERIOR GLAZING: 6mm CLEAR
TEMPERED SOLAR 74 LOW 'E' GLASS IN FACTORY
SEALED UNIT AND SEPARATED BY ARGON GAS SPACE.
CONTACT: VINCE CROKER @ ROCKGLASS.CA
E: VINCE@ROCKGLASS.CA

E13 SPANDREL GLASS PANEL
NON TINTED FIXED OPAQUE SPANDREL GLASS PANEL.
INSULATED METAL BACK PAN.
COLOUR: GREY WITH GREY BACK SCRIM.
CLEAR ANODIZED ALUMINUM FRAMING
GLAZING: INKAN NO. 6-125-I
(PROVIDE SAMPLE FOR APPROVAL)
OR APPROVED EQUAL BY OWNER

E14 VINYL GRAPHICS
INTERCHANGEABLE SURFACE APPLIED VINYL GRAPHICS, SUPPLIED AND INSTALLED BY SDM GRAPHICS.
VARY WITH LOCATION - TBC BY OWNER OR TENANT

E15 ALUMINUM ENTRANCE DOOR
COLOUR: CLEAR ANODIZED

E16 ALUMINUM BACKSIDE CLADDING
COLOUR: CAMBRIDGE WIHTE
STELCO: QC 8695 OR VICWEST: QC 56161

NOTE:
1. GC TO PROVIDE SAMPLES OF ALL FINISHES FOR OWNER/ARCHITECT APPROVAL
2. SHOP DWGS. TO BE PROVIDED FOR APPROVAL FOR ALL LIGHT RIXTURES. REFER TO ELECT. DWGS. FOR ALL WALL MOUNTED UTILITY/SECURITY LIGHTING & CAMERAS (IF REQUIRED).
3. MASONLY CONTROL JOINTS (CJ) TO BE PLACED AS SHOWN. CAULKING COLOURS TO MATCH MASONRY UNIT MORTAR COLOUR.
4. CAULKING AT ALL WINDOWS TO MATCH WINDOW FRAMES.
5. ALL SILLS TO COME WITH DRIP EDGE.

NOTE:
IF SIZES ARE NOT SPECIFIED REFER TO WALL ASSEMBLYS.
CREATIVE STRUCTURES IS NOT RESPONSIBLE FOR FUTURE CHANGES.

GENERAL NOTES:

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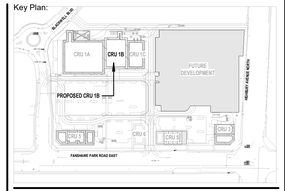
3. THE CONTRACTOR MUST VERIFY AND ACCEPT REPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS ON SITE AND MUST NOTIFY CREATIVE STRUCTURE OF ANY VARIATION FROM THE SUPPLIED INFORMATION.
4. THIS DISCIPLINE IS NOT RESPONSIBLE FOR THE ACCURACY OF SURVEY, AND THE OTHER DISCIPLINES INFORMATION SHOWN ON THIS DRAWING. REFER TO THE APPROPRIATE CONSULTATNS DRAWINGS BEFORE PROCEEDING WITH THE WORK.
5. CONSTRUCTION MUST CONFORM TO ALL APPLICABLE CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
6. THE CONTRACTOR WORKING FROM DRAWINGS NOT SPECIFICALLY MARKED 'FOR CONSTRUCTION' MUST ASSUME FULL REPONSIBILITY AND BEAR COSTS FOR ANY CORRECTIONS OR DAMAGES RESULTING FROM HIS WORK.

Key Plan:



Consultant:

CREATIVE STRUCTURES

CS@CREATIVESTR.CA

Consultant:

NGACAKU ARCHITECTURE INC

Seal:

North Arrow:

General Notes:

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CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE.

CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION.

ANY MATERIAL ALTERATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALL. FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS AFFECTED.

No.	Date	Revision
6	Apr 30, 2024	RFI-14
5	APR 23, 2024	ISSUED FOR PERMIT
4	APR 02, 2024	ISSUED FOR TENDER
3	MAR 30, 2024	ISSUED FOR COORDINATION
2	FEB 08, 2024	ISSUED FOR CLIENT REVIEW
1	FEB 06, 2024	60% ISSUED FOR CLIENT REVIEW

ISSUES/REVISION TABLE

Project:

WESTDELL DEVELOPMENT CORP

1300 FANSHAWE PARK ROAD. EAST. - CRU #1-UNIT B

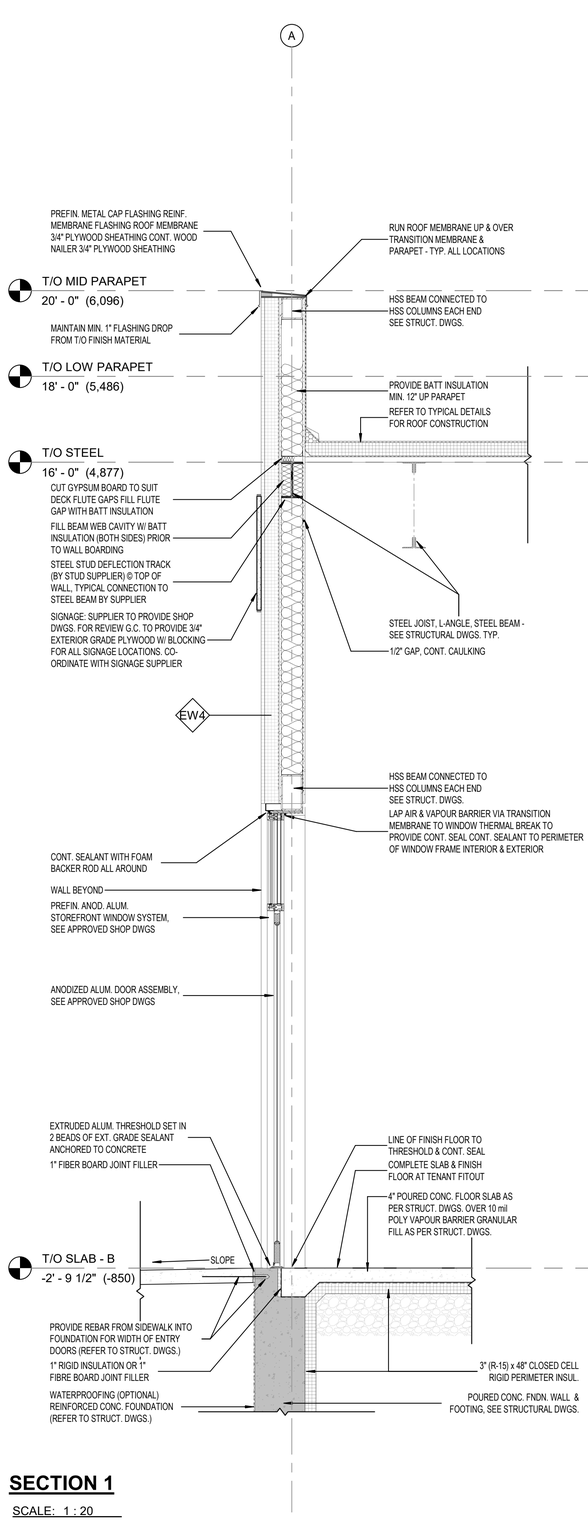
1300 FANSHAWE PARK ROAD. EAST. LONDON, ON.

Drawing Title:

ELEVATIONS II

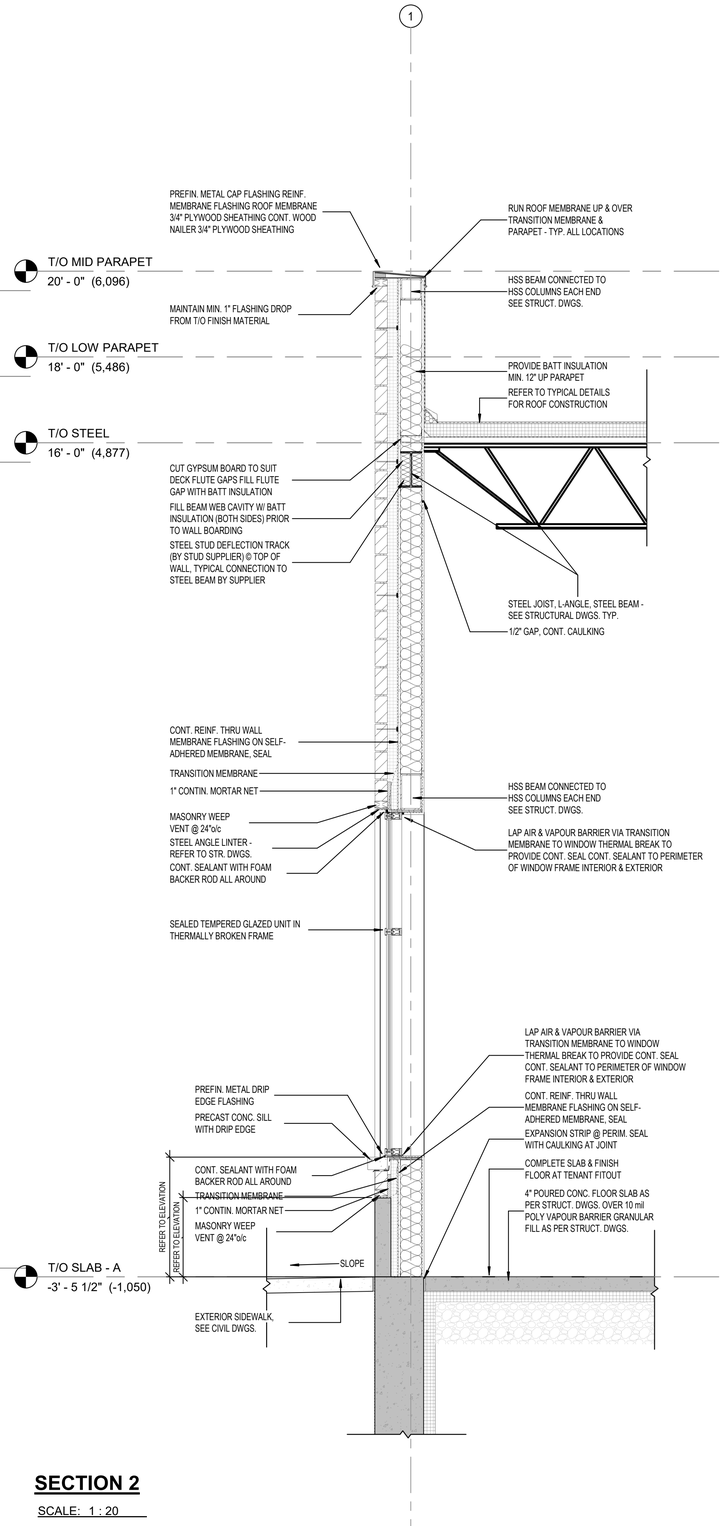
Drawn By: D.H.
Scale: AS INDICATED
Checked By: K.N.
Plot Date: APR 23, 2024
Project Date: JAN 2024
Project No: 2023-102

Drawing No: A-3.2
Revision: 6



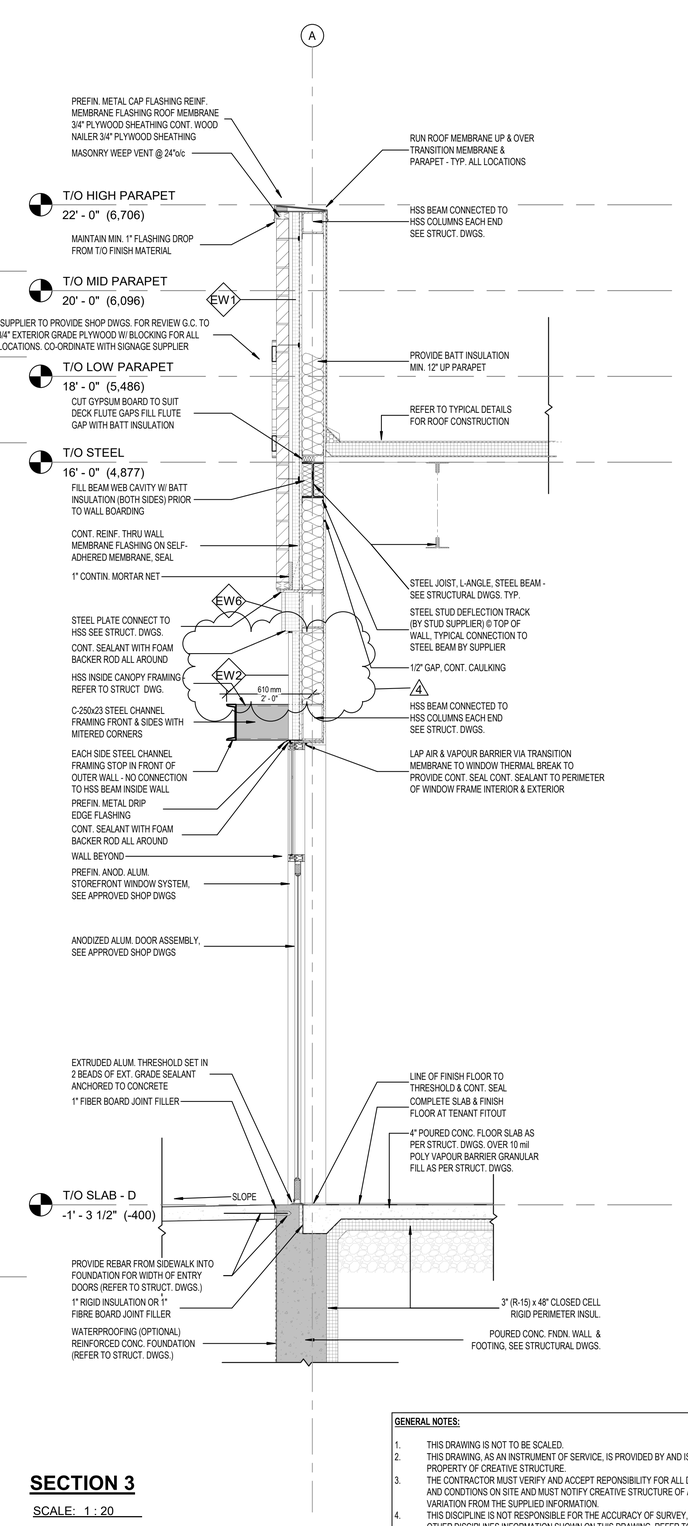
SECTION 1

SCALE: 1 : 20



SECTION 2

SCALE: 1 : 20



SECTION 3

SCALE: 1 : 20

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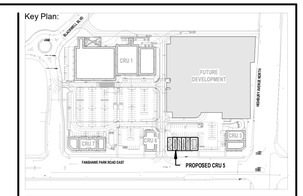
Key Plan:



Consultant:

CREATIVE STRUCTURES

CS@CREATIVESTR.CA

Consultant:

NGACAKU ARCHITECTURE INC

Seal:

North Arrow:

General Notes:

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No.	Date	Revision
4	APR 30, 2024	RFI-14
3	APR 23, 2024	ISSUED FOR PERMIT
2	APR 02, 2024	ISSUED FOR TENDER
1	Jan 31, 2024	60% ISSUED FOR CLIENT REVIEW

ISSUES/REVISION TABLE

Project:

WESTDELL DEVELOPMENT CORP

1300 FANSHAWE PARK ROAD. EAST. - CRU #5

1300 FANSHAWE PARK ROAD. EAST. LONDON, ON.

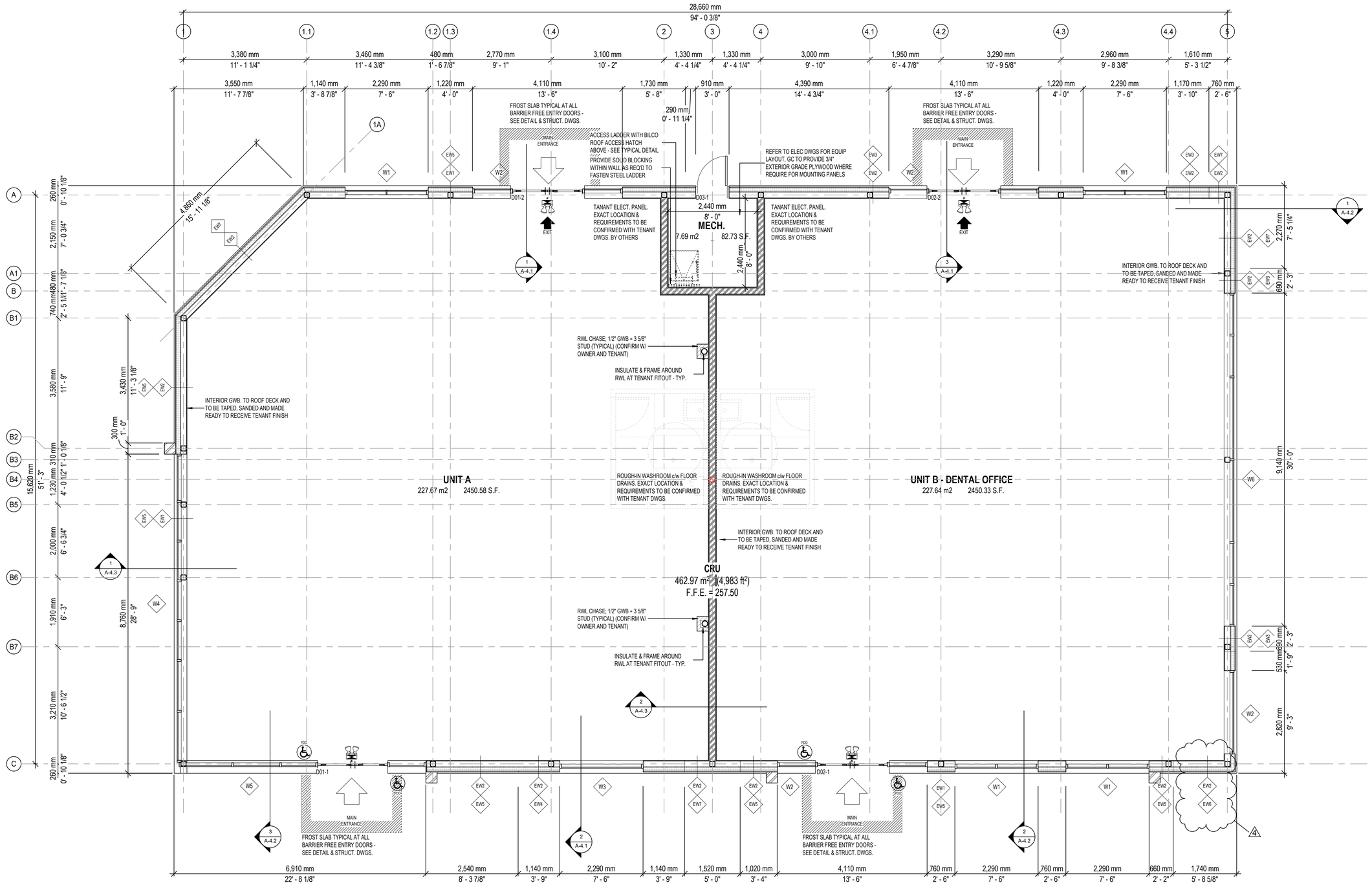
Drawing Title:

WALL SECTION I

Drawn By:	D.H.	Scale:	AS INDICATED
Checked By:	K.N.	Plot Date:	APR 30, 2024
Project Date:	JAN 2024		
Project No:	2023-102		

Drawing No: A-4.1

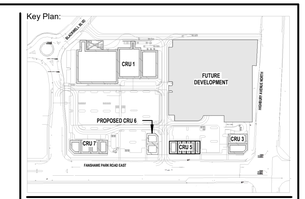
Revision: 4



FLOOR PLAN

SCALE: 1 : 50

Key Plan:



Consultant:

CREATIVE STRUCTURES

CS@CREATIVESTR.CA

Consultant:

NGACAKU ARCHITECTURE INC

Seal:

North Arrow:

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No.	Date	Revision
4	Apr 30, 2024	RFI-14
3	Apr 23, 2024	ISSUED FOR PERMIT
2	Apr 03, 2024	ISSUED FOR TENDER
1	Jan 29, 2024	60% ISSUED FOR CLIENT REVIEW

ISSUES/REVISION TABLE

Project:

WESTDELL DEVELOPMENT CORP

1300 FANSHAWE PARK RD. EAST. - CRU #6

1300 FANSHAWE PARK RD. EAST. LONDON, ON.

Drawing Title:

FLOOR PLAN

Drawn By:	D.H.	Scale:	AS INDICATED
Checked By:	K.N.	Plot Date:	APR 23, 2024
Project Date:	JAN 2024		
Project No:	2023-102		

Drawing No: A-2.2

Revision: 4

GENERAL NOTES:

1. THE OWNER/OWNER'S CONTRACTOR SHALL HAVE ITS PROFESSIONAL ENGINEER PROVIDE FULL-TIME OFF-SITE REVIEW DURING CONSTRUCTION ON AN EXISTING MUNICIPAL STREET OR EASEMENT AND PROVIDE A CERTIFICATE OF COMPLETION OF WORKS UPON COMPLETION OF ALL WORKS TO BE CONSTRUCTED.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT ONTARIO BUILDING CODE (OBC) AND ANY APPLICABLE STATUTES, REGULATIONS, CODES AND BY-LAWS.
3. STRIK, BALDINELLI, MONIZ LTD. (SBM) IS NOT RESPONSIBLE FOR THE INFORMATION (EXISTING TOPOGRAPHY, BENCHMARKS, PROPERTY BOUNDARY, ETC.) PROVIDED BY OTHERS.

CONSTRUCTION NOTES:

1. REFER TO THE SUBDIVISION DRAWING SET FOR LAYOUT DIMENSIONING AND SIGN/POST DETAILS.
2. THE OWNER'S CONTRACTOR IS TO CONTACT THE CONSULTING ENGINEER (SBM) FOR FULL-TIME OFF-SITE REVIEW. THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE PRIOR TO REQUIRED OFF-SITE REVIEW.
3. THE OWNER'S CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES UNDER THE OCCUPATIONAL HEALTH AND SAFETY ACT AS REQUIRED BY THE MINISTRY OF LABOUR TO EXECUTE THE WORK.
4. THE OWNER'S CONTRACTOR IS TO REVIEW AND CONFIRM ALL EXISTING CONDITION INFORMATION & INFORM SBM OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. SBM IN NO WAY ACCEPTS RESPONSIBILITY FOR ANY INACCURACIES FOUND ON THIS PLAN RELATIVE TO EXISTING CONDITIONS FOR THE SITE.
5. PRIOR TO COMMENCING ANY CONSTRUCTION, ALL SEWER OUTLET INFORMATION, BENCHMARKS, ELEVATIONS, DIMENSIONS, GRADES, ETC. MUST BE CHECKED BY THE CONTRACTOR AND VERIFIED AND ANY DISCREPANCIES REPORTED TO THE ENGINEERS.
6. PRIOR TO COMMENCING ANY WORK ON THE INSTALLATION OF SERVICES & GRADING, AN APPROVED SET OF PLANS AND SPECIFICATIONS MUST BE AVAILABLE ON THE JOB AND SHALL REMAIN THERE WHILE WORK IS BEING DONE.
7. STRIP FULL DEPTH OF TOPSOIL IN AREAS TO BE DISTURBED AND STOCK PILE FOR RE-USE IN GRASSED/LANDSCAPED AREAS.
8. OWNER'S CONTRACTOR IS RESPONSIBLE FOR ALL AS-BUILT INVERTS AND GRADES, RECORD ANY DEVIATION OF PIPE OR STRUCTURE LOCATION INVOLVED WITH THIS PROJECT AND OWNER'S CONTRACTOR TO PROVIDE A COPY OF THE AS-BUILT DRAWING SHOWING ALL CHANGES CLEARLY MARKED IN RED.
9. THE OWNER'S CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS PROJECT AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO BASE ASPHALT AND SOD OR THE SATISFACTION OF THE MUNICIPAL ENGINEER.
10. THE CONTRACTOR SHALL INFORM THE LONDON TRANSIT COMMISSION (L.T.C.) AT LEAST ONE WEEK PRIOR TO COMMENCING CONSTRUCTION ON ANY STREET THAT IS AN L.T.C. BUS ROUTE THAT WILL BE AFFECTED BY CONSTRUCTION.
11. THE CONTRACTOR IS RESPONSIBLE FOR:
    - 11.1. CONNECTING ANY EXISTING SEWER OR DRAIN ENCOUNTERED DURING CONSTRUCTION TO A NEW SEWER OF SIMILAR TYPE, SIZE AND MATERIAL OR INTO ANOTHER EXISTING SEWER OF THE SAME TYPE AND TO REPORT ON AS-BUILT DRAWINGS.
    - 11.2. ENSURING THAT THERE IS NO INTERRUPTION OF ANY SURFACE OR SUBSURFACE DRAINAGE FLOW THAT WOULD ADVERSELY AFFECT NEIGHBOURING PROPERTIES.
12. NO FOUNDATION DRAIN CONNECTIONS WILL BE PERMITTED INTO THE SANITARY SEWERS AND NO DIRECT GRAVITY CONNECTIONS FROM THE FOUNDATION DRAINS WILL BE PERMITTED TO THE STORM SYSTEM UNLESS THE STORM SYSTEM HAS THE CAPACITY TO PROVIDE FOR SUCH CONNECTIONS TO THE SATISFACTION OF THE MUNICIPAL ENGINEER.
13. WORK ON OR ADJACENT TO THE MUNICIPAL CITY RIGHT OF WAY (R.O.W.) SHALL BE COMPLETED IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 CURRENT EDITION AND THE ONTARIO TRAFFIC MANUAL BOOK 18 CURRENT EDITION.
14. THE OWNER'S CONTRACTOR IS TO MANAGE ALL EXCESS SOIL AS PER O.REG 406/19 'ON-SITE AND EXCESS SOIL MANAGEMENT'

SURFACE WORKS NOTES:

1. ALL WORK IN THE CITY ROAD ALLOWANCE SHALL MEET THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CITY OF LONDON ENVIRONMENTAL AND ENGINEERING SERVICES DEPARTMENT. THE STANDARD CONTRACT DOCUMENTS FOR MUNICIPAL CONSTRUCTION PROJECTS AS ADOPTED BY COUNCIL ON MAY 30, 1994 AND AS AMENDED FROM TIME TO TIME ARE TO BE APPLIED TO WORKS WITHIN THE CITY ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE CONTRACTOR IS REQUIRED TO OBTAIN & PAY FOR PERMIT TO WORK IN CITY R.O.W.
2. ALL SURFACES WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST AS GOOD AS ORIGINAL, OR AS PER BELOW (WHICHEVER IS GREATER) OR IF WITHIN THE CITY RIGHT OF WAY TO THE SATISFACTION OF THE CITY ENGINEER, ALL AT NO COST TO THE CITY.
    - 2.1. GRASSED AREAS TO BE RESTORED w/ 100mm TOPSOIL + SOD.
    - 2.2. CONCRETE SIDEWALK TO CofL STANDARD SR-1.0.
    - 2.3. CONCRETE CURB AND GUTTER TO OPSD 600.040 (BLACKWELL BOULEVARD ROAD BARRIER CURB & GUTTER).
    - 2.4. ANY ASPHALT AREA DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS FOLLOWS:
        - 2.4.1. PROOF ROLL SUBGRADE (TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER) PRIOR TO PLACEMENT OF GRANULARS (98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) MIN.).
        - 2.4.2. MILL ADJACENT ASPHALT TO BE TIED INTO 50mm DEEP x 500mm WIDE PRIOR TO RESTORATION SEE DETAIL ON SHEET C6.

PROPOSED PAVEMENT DESIGN (TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER)

STREET CLASS	STREET NAME	ROAD ALLOWANCE	EP TO EP	MAXIMUM SPRING REBOUND	HL-3 SURFACE ASPHALT	HL-8 BINDER ASPHALT	GRANULAR 'A' BASE	GRANULAR 'B' BASE
SECONDARY COLLECTOR	BLACKWELL BOULEVARD	21.50m	9.50m	1.50mm	40mm	90mm (2X45mm)	150mm	450mm

GRANULARS SHALL BE COMPACTED TO 100% SPMDD AND ASPHALTS SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH OPSS.MUNI 310 & 1150 AND COMPACTED TO 97% MARSHALL MIX DESIGN BULK DENSITY. TACK COAT REQUIRED PER SUPPLEMENTAL STANDARDS FOR ROADS 310.07.03 IF INSTALLED MORE THAN 2 WEEKS AFTER BINDER ASPHALT

    - 2.5. RESTORE ALL PAVEMENT MARKINGS TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS AND MARKINGS SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 710 'CONSTRUCTION SPECIFICATION FOR PAVEMENT MARKING'.
    - 2.6. ALL EXTERIOR HORIZONTAL CONCRETE SHALL MATCH EXISTING THICKNESS OR BE MIN 100mm THICK, 32 MPa AT 28 DAYS c/w 5-8% AIR ENTRAINMENT, SLUMP OF 80mm (±20mm) OR 30mm (±10mm) WHEN USING A FORMING MACHINE AND TEMPERATURE BETWEEN 10-28°C. ON MIN 100mm THICK GRANULAR 'A' COMPACTED TO 100% SPMDD.
3. ALL AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED. ANY DAMAGES TO THOSE AREAS ARE TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

UTILITIES NOTES:

1. ALL WORK FOR COORDINATION, DESIGN, AND CONSTRUCTION OF UTILITIES IS BY OTHERS. SBM DESIGN AND DRAWINGS ARE FOR MUNICIPAL SERVICING ONLY. ANY UTILITY INFORMATION SHOWN IS FOR REFERENCE/COORDINATION PURPOSES ONLY AND MAY NOT BE ACCURATE.
2. UTILITY PROVIDERS MUST BE INFORMED AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION ON ANY EXISTING CITY ROAD ALLOWANCE. ALL EXISTING UNDERGROUND SERVICE OR UTILITIES WITHIN THE LIMITS OF THE CONSTRUCTION SITE SHALL BE LOCATED AND MARKED. ANY UTILITIES, DAMAGED OR DISTURBED DURING CONSTRUCTION, SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING BODY AT THE CONTRACTOR'S EXPENSE.
3. ALL EXISTING UNDERGROUND UTILITY (TELEPHONE, HYDRO, GAS, CABLE, SEWER, WATERMAINS, ETC.) THAT WILL BE CROSSED UNDER DURING THE INSTALLATION OF SERVICES FOR THIS DEVELOPMENT SHALL BE SUPPORTED, AS MAY BE REQUIRED BY THE OWNERS OF THE UTILITY BEING CROSSED UNDER.
4. OWNER'S CONTRACTOR TO LOCATE/FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. OWNER'S CONTRACTOR TO COORDINATE WITH UTILITIES PROVIDER FOR BRACING, DECOMMISSIONING AND/OR RELOCATION OF EXISTING GAS, HYDRO, TELEPHONE, CABLE, ETC. SERVICES, IF REQUIRED.

SEDIMENT & EROSION CONTROL MEASURES:

1. PROTECT ALL EXPOSED SURFACES AND CONTROL ALL RUNOFF DURING CONSTRUCTION.
2. SEDIMENT AND EROSION CONTROL MEASURES TO BE REMOVED AT COMPLETION OF PROJECT (FOLLOWING COMPLETION OF BASE ASPHALT AND SOD).
3. MAINTAIN EROSION CONTROL MEASURES DURING CONSTRUCTION.
4. ALL COLLECTED SEDIMENT TO BE DISPOSED OF AT AN APPROVED LOCATION.
5. MINIMIZE AREA DISTURBED DURING CONSTRUCTION.
6. ALL DEWATERING TO BE DISPOSED OF IN AN APPROVED SEDIMENTATION BASIN.
7. PROTECT ALL CATCH BASINS, CURB INLET CATCH BASINS AND PIPE ENDS FROM SEDIMENT INTRUSION WITH GEOTEXTILE FABRIC (TERRAFIX 270 R), SILT SACKS, OR APPROVED EQUAL.
8. KEEP ALL SUMPS CLEAN DURING CONSTRUCTION.
9. PREVENT WIND-BLOWN DUST.
10. STRAW BALES TO BE USED IN LOCALIZED AREAS AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR WORKS WHICH ARE IN OR ADJACENT TO FLOOD LINES, FILL LINES AND HAZARDOUS SLOPES.
11. STRAW BALES TO BE TERMINATED BY ROUNDING BALES TO CONTAIN AND FILTER RUNOFF.
12. OBTAIN APPROVAL FROM THE UPPER THAMES RIVER CONSERVATION AUTHORITY (UTRCA) PRIOR TO CONSTRUCTION FOR WORKS WHICH ARE IN, OR ADJACENT TO FLOOD LINES, FILL LINES AND HAZARDOUS SLOPES.
13. ALL SILT FENCING AND DETAILS ARE AT THE MINIMUM TO BE CONSTRUCTED IN ACCORDANCE WITH THE MINISTRY OF NATURAL RESOURCES GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES.
14. ALL OF THE ABOVE NOTES AND ANY SEDIMENT & EROSION CONTROL MEASURES ARE AT THE MINIMUM TO BE IN ACCORDANCE WITH THE MINISTRY OF NATURAL RESOURCES GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES.
15. SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE INSPECTED WEEKLY OR FOLLOWING SIGNIFICANT RAINFALL EVENTS.
16. OFF-SITE SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE REVIEWED AND MODIFIED TO MEET THE CHANGING SITE.
17. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REPAIRED WITHOUT DELAY BY THE OWNERS CONTRACTOR AS INSTRUCTED BY THE CONTRACT ADMINISTRATOR/ENGINEER AT NO EXPENSE TO THE OWNER.

REFERENCE DOCUMENTS:

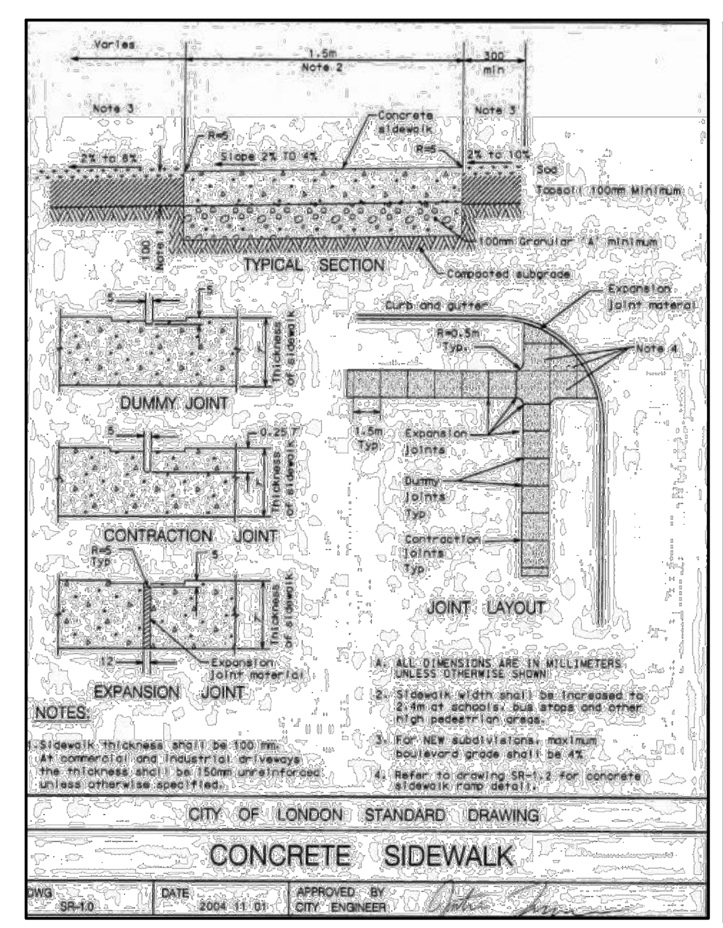
1. STONEY CREEK SOUTH SUBDIVISION PHASE 1 PLANS BY WHITNEY ENGINEERING STAMPED AUGUST 9, 2016.
2. TOPOGRAPHIC SURVEY BY MTE DATED OCTOBER 28, 2022.
3. STONEY CREEK SOUTH SUBDIVISION PHASE 2 BY MTE/WHITNEY ACCEPTED BY CofL DECEMBER 2, 2020.
4. SITE PLAN PROVIDED BY PATRICK DAVID TROTTIER ARCHITECTS DATED APRIL 2024.
5. DESIGN BRIEF PREPARED BY STRIK BALDINELLI MONIZ (SBM), PROJECT NO. SBM-22-1747, DATED APRIL 2024.
6. LANDSCAPE DESIGN BY DAN WEAGANT DATED APRIL 2024.
7. RECORD DRAWINGS OBTAINED FROM CofL DRAWING FILE No. 24331, 24325, 24330 & 24324.
8. TOPOGRAPHIC SURVEY BY LDS DATED JUNE 27, 2021 MODIFIED PER INSTRUCTIONS FROM LDS RECEIVED BY EMAIL SEPTEMBER 15, 2022 BY RELOCATING BASED ON COMMON LINEWORK WITH AGM PLANS.
9. CIVIL ENGINEERING DRAWINGS BY SBM, PROJECT NO. SBM-22-1747, DATED APRIL 2024.

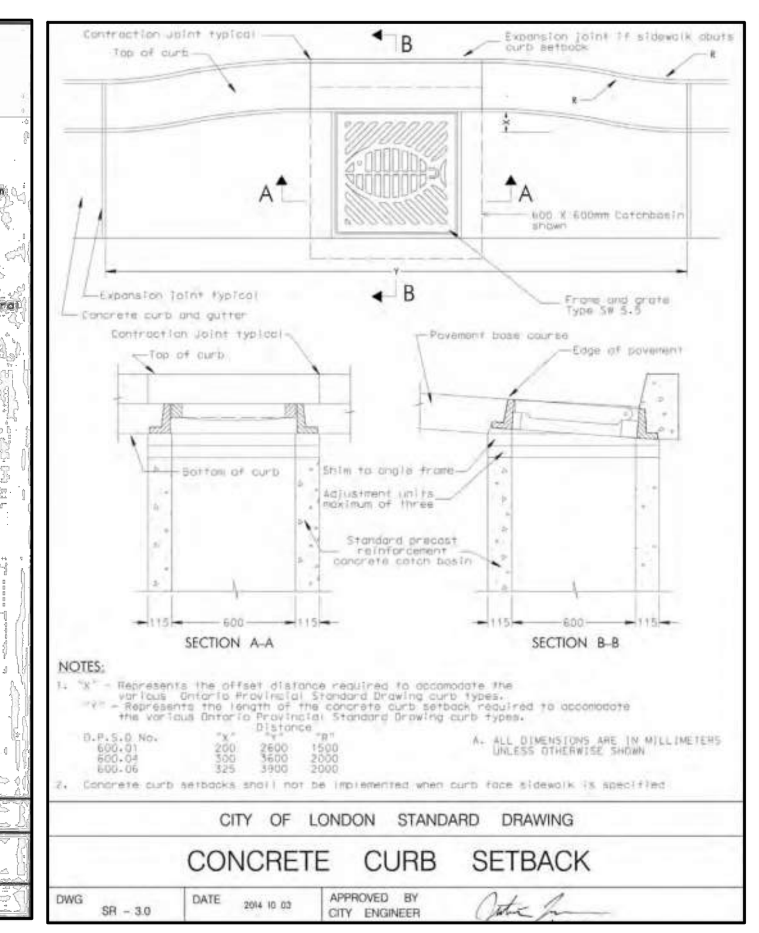
SERVICING NOTES:

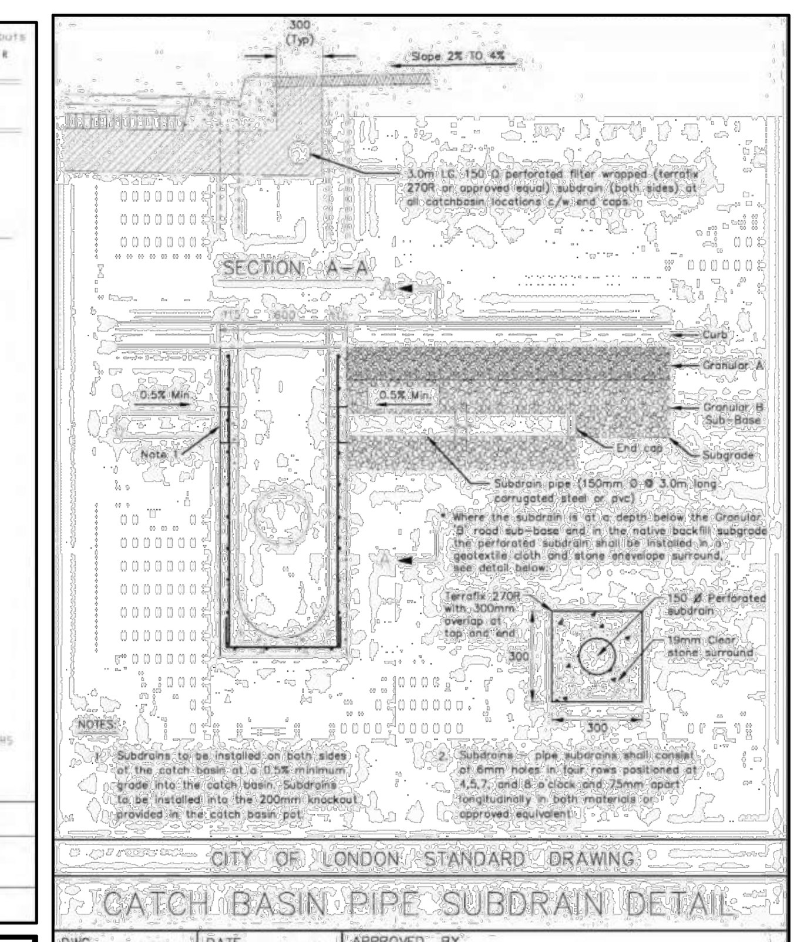
1. ALL ORGANIC, UNSTABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCE, SERVICES, UTILITIES, OR FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED FILL MATERIAL, ALL TO THE SATISFACTION OF A GEOTECHNICAL ENGINEER AND SHOULD BE PLACED IN LIFTS NOT EXCEEDING 300mm (LOOSE) THAT ARE COMPACTED TO 95% SPMDD (100% FOR PAVED SURFACES). THE FILL MATERIAL SHOULD COMPRISE OF CLEAN, COMPACTIBLE FILL WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT.
2. REMOVE ALL TRENCH WATER WHEN PIPE LAYING IS IN PROGRESS. ALL REQUIREMENTS FOR DEWATERING REGISTRY AND PERMITS (INCLUDING THE M.E.C.P.'S PERMIT TO TAKE WATER AND REGISTRATION, IF REQUIRED) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CLASS B1 BEDDING (CRUSHED STONE) TO EXTEND FROM THE INLET AND OUTLET PIPES OF ANY MAINTENANCE HOLE IN THE CITY ROW FOR A DISTANCE OF 5.0m. REFER TO THE CITY OF LONDON'S DRAWING SW-1.0.
4. 3.0m LENGTHS OF 150mm DIAMETER PERFORATED FILTER WRAPPED PVC PIPE ARE TO BE INSTALLED AS SUBDRAINS CONNECTED TO TWO SIDES OF EACH CATCHBASIN AND CATCHBASIN MAINTENANCE HOLE WITHIN PAVED AREAS. THE SUBDRAINS ARE TO BE LOCATED JUST BELOW SUBGRADE ELEVATION.
5. ENSURE MINIMUM OF 1 ADJUSTMENT UNIT FOR ALL STRUCTURES. MAXIMUM TOTAL ADJUSTMENT UNITS HEIGHT: 300mm.
6. RUNG SPACING IN MAINTENANCE HOLES TO BE 300mm MIN. AND A MAX. OF 600mm DISTANCE BETWEEN THE LID AND THE FIRST RUNG.
7. ALL SUBSTITUTIONS MUST BE APPROVED BY THE CITY ENGINEER.
8. THE ELEVATION OF THE GROUND WATER TABLE IS UNKNOWN. CONTRACTOR TO ADVISE SBM IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS; FURTHER REVIEW/INVESTIGATION BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS, CIVIL STRUCTURES ARE TO BE DESIGNED FOR HYDROSTATIC PRESSURE AND UPLIFT/BUOYANCY FORCES. PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO FOR REVIEW

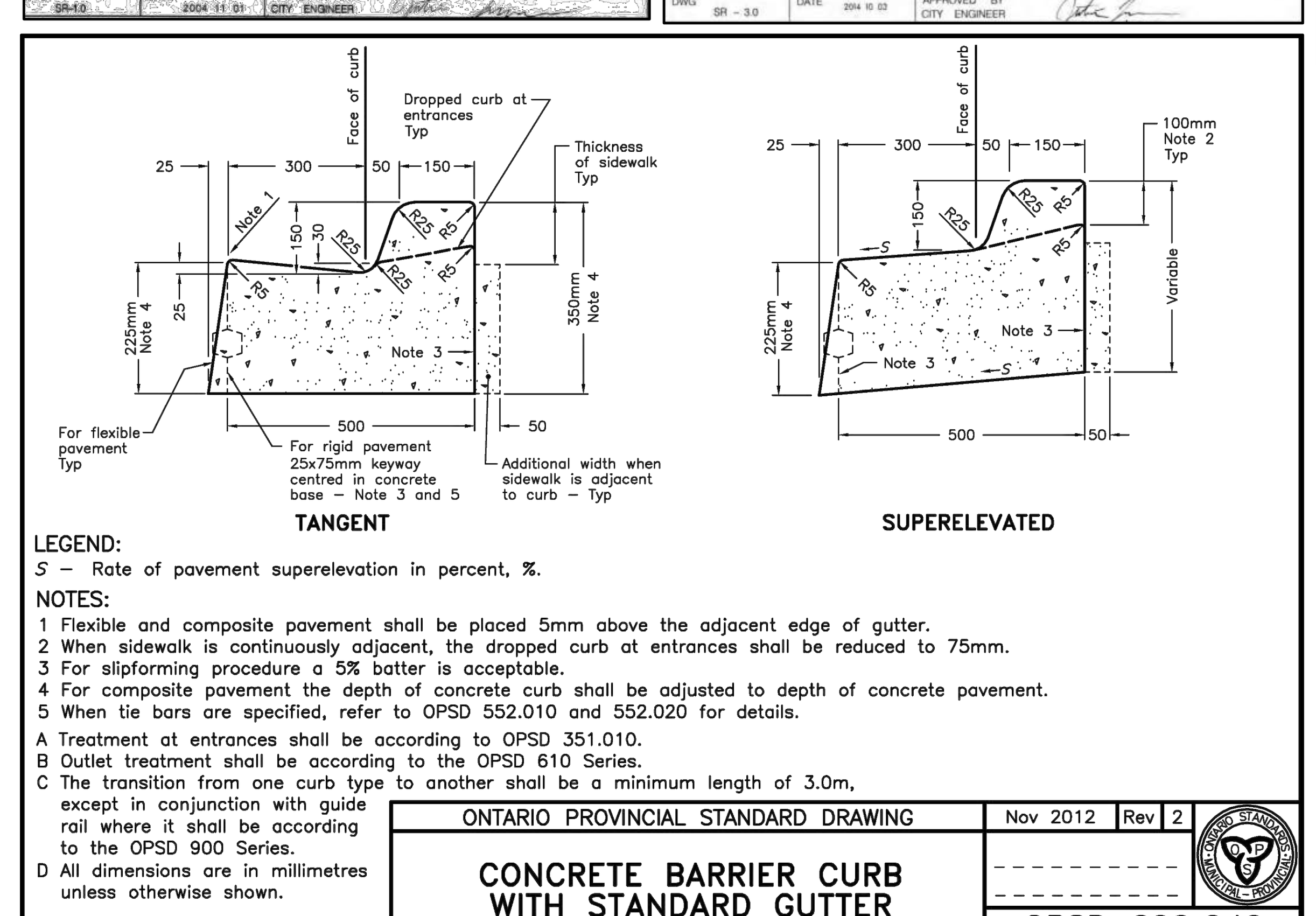
LEGEND:

Symbol	Description	Symbol	Description	Symbol	Description
271.00	EXISTING SPOT ELEVATION	20.0-300ø ST @ 1.0%	EXISTING STORM SEWER		BUILDING ENTRANCE
271.00	EXISTING SPOT ELEVATION (TO REMAIN)	20.0-300ø ST @ 1.0%	PROPOSED STORM SEWER		OVERHEAD DOOR
271.00	PROPOSED SPOT ELEVATION	20.0-150ø SA @ 1.0%	EXISTING SANITARY SEWER		DRIVETHRU WINDOW
(271.00)	PROPOSED SWALE ELEVATION	20.0-150ø SA @ 1.0%	PROPOSED SANITARY SEWER		PROPOSED LIGHT-DUTY ASPHALT
	EXISTING CATCH BASIN	150 PVC WSC	EXISTING WATERMAIN		PROPOSED HEAVY-DUTY ASPHALT
	PROPOSED CATCH BASIN	150 PVC WSC	PROPOSED WATERMAIN		PROPOSED CONCRETE
	EXISTING MAINTENANCE HOLE		EXISTING FIRE HYDRANT		PROPOSED SILT SACK
	PROPOSED STORM MAINTENANCE HOLE		PROPOSED FIRE HYDRANT		PROPOSED STRAW BALE BARRIER
	PROPOSED SANITARY MAINTENANCE HOLE		EXISTING WATER VALVE		EXISTING BUILDING
2.0%	PROPOSED SLOPE		PROPOSED WATER VALVE		PROPOSED BUILDING
	PROPOSED DRAINAGE DIRECTION		EXISTING WATER METER		PROPOSED SILT FENCE
EP	EDGE OF PAVEMENT		PROPOSED WATER METER		LIMITS OF SUBJECT PROPERTY
℄	GROUND ELEVATION AT TOP OF CENTRELINE OF ROAD	®	PROPOSED RAMP		
HP	HIGH POINT		APPROXIMATE EXTENTS OF PONDING (SWM OR OFR)		
LP	LOW POINT		APPROXIMATE EXTENTS OF SERVICING INSULATION (SHOWN SCHEMATICALLY)		
TL	TOP OF LID		MILL/PAVE LAP JOINT AS PER DETAIL ON THIS PAGE		
FR-2	PROPOSED SIGN, TYPE OF SIGN				









LIST OF COMMON STANDARDS:

ONTARIO PROVINCIAL STANDARDS:

OPSD 219.110	LIGHT-DUTY SILT FENCE BARRIER
OPSD 600.040	CONCRETE BARRIER CURB WITH STANDARD GUTTER

CITY OF LONDON STANDARDS:

SR-1.0	CONCRETE SIDEWALK
SR-3.0	CONCRETE CURB SETBACK
SR-13.1	STEPPED MILLED JOINT PAVEMENT DETAIL
SR-14.0	PAVEMENT CUT GUIDELINES MATCHING NEW CONSTRUCTION TO EXISTING ASPHALT
SW-3.1	CATCH BASIN PIPE SUBDRAIN DETAIL

SITE BENCHMARK:

SITE BENCHMARK #1

MONUMENT TYPE: BOLT

LOCATION: NORTH PARK COMMUNITY CHURCH NO1510 FANSHAWE PARK ROAD EST. BOLT SET IN THE SOUTHWEST FACE OF THE TWO STOREY SECTION ON THE WEST SIDE, 1.48m OF THE NORTHWEST CORNER AND 0.05m DOWN FROM THE BRICK.

GEODETIC ELEVATION: 260.029m

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

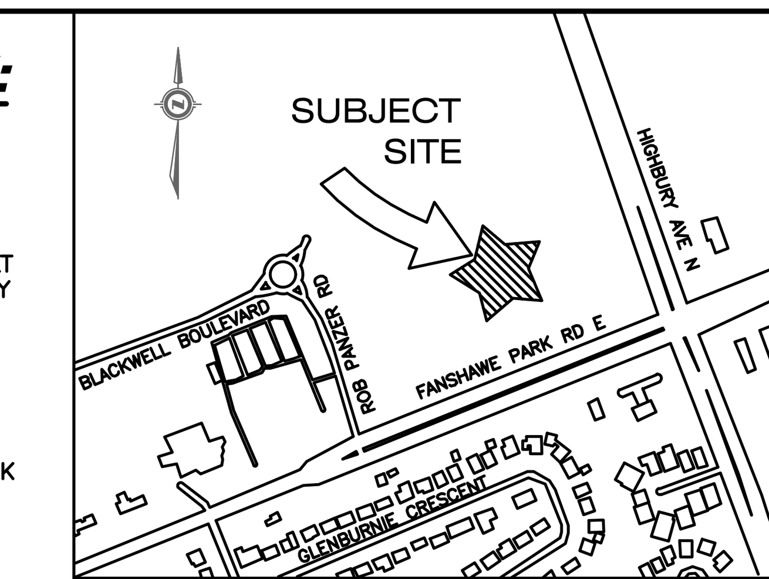
SITE BENCHMARK #2

MONUMENT TYPE: BOLT

LOCATION: CONCRETE BOX CULVERT CROSSING SUNNINGDALE ROAD EAST, 320m WEST OF THE CENTERLINE OF HIGHBURY AVENUE NORTH. BOLT SET IN THE EAST FACE ON THE NORTH SIDE OF SUNNINGDALE ROAD EAST, 0.12m, SOUTH OF THE NORTHEAST CORNER AND 0.12m DOWN FROM THE TOP.

GEODETIC ELEVATION: 260.902m

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

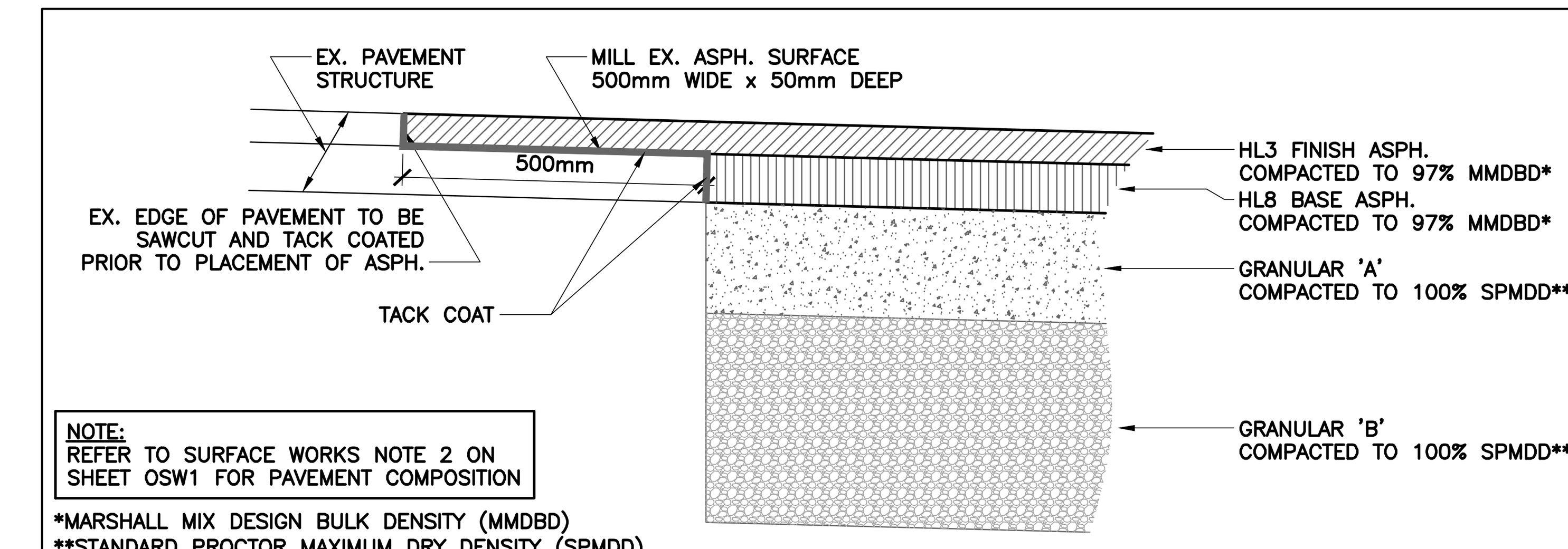


KEY PLAN

N.T.S.

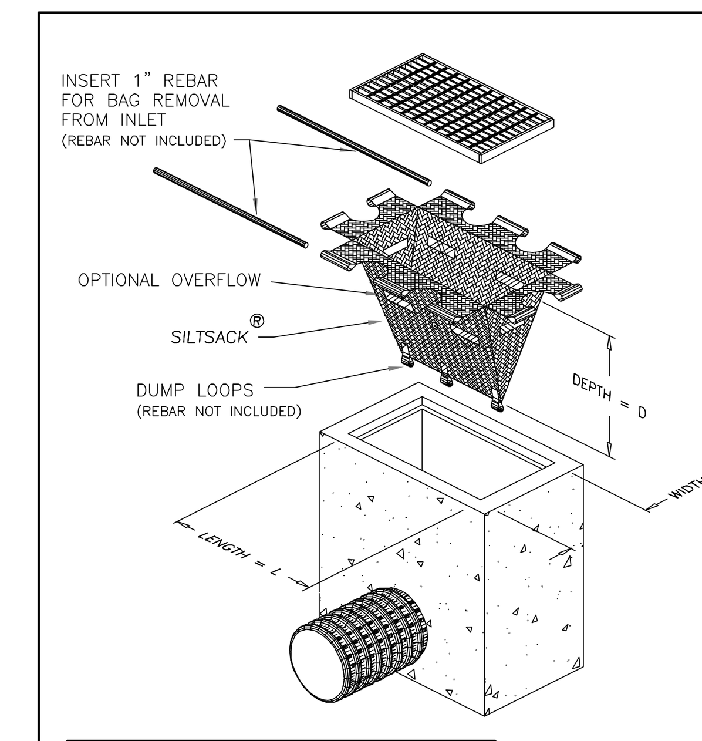
LEGAL INFORMATION

PART OF
LOT 9, CONCESSION 5
IN THE
CITY OF LONDON
COUNTY OF MIDDLESEX



PAVEMENT MILLING DETAIL

N.T.S.



SILT SACK DETAIL

N.T.S.

LIST OF ITEMS REQUIRING ENGINEER'S REVIEW
NOTE: CONTRACTOR TO PROVIDE MIN. 48 HOURS NOTICE PRIOR TO REQUESTED FIELD REVIEW TIME.
EROSION AND SEDIMENT CONTROL MEASURES, UPON COMPLETION
SERVICING IN MUNICIPAL RIGHT-OF-WAY (R.O.W.), EXISTING AND FUTURE, DURING CONSTRUCTION
GRADING – CURB & GUTTER STRINGLINE, PRIOR TO CURB INSTALLATION
GRADING – ROAD SUBGRADE, PRIOR TO GRANULARS
GRADING – GRANULAR 'B', PRIOR TO GRANULAR 'A'
GRADING – GRANULAR 'A', PRIOR TO BASE ASPHALT
GRADING – BASE ASPHALT, PRIOR TO TOP COAT ASPHALT
GRADING – TOP COAT ASPHALT
GRADING – BOULEVARDS (ROUGH GRADING)

LIST OF SUBMITTALS
NOTE: CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING MATERIALS.
ASPHALT JOB MIX FORMULA(E)
CONCRETE (CURB AND SIDEWALK) MIX DESIGN(S)
GRANULAR 'A' AND 'B' SIEVE ANALYSIS'
EXCESS FILL – DUMP SITE INFORMATION AND PERMISSION LETTER
MATERIAL TESTING REPORT – ENGINEERED FILL SOURCE LETTER (RE CONTAMINANTS, ETC.)
MATERIAL TESTING REPORT – ENGINEERED FILL COMPACTION
MATERIAL TESTING REPORT – ENGINEERED FILL PLAN
MATERIAL TESTING REPORT – SUBGRADE COMPACTION/PREPARATION
MATERIAL TESTING REPORT – GRANULAR COMPACTION
MATERIAL TESTING REPORT – CONCRETE CYLINDERS
MATERIAL TESTING REPORT – ASPHALT COMPACTION
MATERIAL TESTING REPORT – ASPHALT SAMPLES
AS-BUILT SURVEY FOR EARTHWORKS QUANTITIES

LIST OF DRAWINGS

SHEET OSW1	NOTES, LEGEND, & DETAILS
SHEET OSW2	OFF-SITE WORKS PLANS

AS CONSTRUCTED SERVICES	COMPLETION			No.	REVISIONS	D/M/Y	BY
		DESIGN	JSF	1	ISSUED FOR SITE PLAN APPROVAL 3	06/10/23	FZ
		DRAWN	JSF	2	ISSUED FOR SITE PLAN APPROVAL 4	30/11/23	FZ
		CHECKED	LS	3	ISSUED FOR SITE PLAN APPROVAL 5	27/02/24	FZ
		APPROVED	HA	7	ISSUED FOR SITE PLAN APPROVAL 6	22/03/24	FZ
		DATE	23/02/2024	8	ISSUED FOR SITE PLAN APPROVAL 7	30/04/24	FZ
				9	ISSUED FOR TENDER	01/05/24	FZ
		CAD	22-1747				

CONSULTANT
STRIK BALDINELLI MONIZ
PLANNING • CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8
Tel: (519) 471-6667 Fax: (519) 471-0034
Email: sbm@sbmltd.ca

ENGINEER'S STAMP: LICENSED PROFESSIONAL ENGINEER, May/01/24, H. AHMAD, 100507781, PROVINCE OF ONTARIO

ENGINEER'S STAMP

CLIENT
STONEY CREEK COMMONS INC
1701 RICHMOND CREEK COMMONS INC.
LONDON, ON
N5X 3Y2
P: 519-850-0000
E: INFO@WESTDELLCORP.COM

SCALE: AS NOTED

TITLE: NOTES, LEGEND, & DETAILS

PROPOSED COMMERCIAL DEVELOPMENT
1300 FANSHAWE PARK ROAD EAST
LONDON, ON.

PROJECT No. SBM-22-1747

SHEET No. OSW1

PLAN FILE No. SPA23-031

NOTE: ROW CONSTRUCTION SHALL BE PER SUBDIVISION DESIGN. PROVIDED ELEVATIONS IN THIS PLAN ARE FROM THE SUBDIVISION DESIGN AND INTERPOLATED GRADES FROM THE SUBDIVISION DESIGN FOR CONVENIENCE. SEE REFERENCE DOCUMENT #3 ON SHEET OSW1 FOR ADDITIONAL DETAIL.

BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET OSW1, WHICHEVER IS GREATER, ALL AT NO COST TO THE CITY.

ALL CLEARANCES TO ELECTRICAL CONDUCTORS AS SET OUT IN THE CURRENT OBC DIV. B–3.1.19.1 'ELECTRICAL CONDUCTOR CLEARANCES TO BUILDINGS' SHALL BE MAINTAINED

THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 FOR ALL WORKS WITHIN THE CITY RIGHT–OF–WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE CITY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

UTILITIES NOTE:
FOR CLARITY, NOT ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO CONSTRUCTION.

SEDIMENT AND EROSION CONTROL MEASURES MAY ONLY BE REMOVED UPON STABILIZATION OF CONTRIBUTING CATCHMENT AREA AND SUBJECT TO APPROVAL OF ENGINEER/CITY OF LONDON.

THE OWNER'S CONTRACTOR IS TO MANAGE ALL EXCESS SOIL AS PER O.REG 406/19 'ON–SITE AND EXCESS SOIL MANAGEMENT'

TREE PRESERVATION NOTE:
THERE IS NO VEGETATION ON–SITE. NO TREE PRESERVATION PLAN IS REQUIRED

OFF–SITE WORKS NOTE:
PERMIT OF APPROVED WORKS FOR ALL EXTERNAL WORKS IS REQUIRED.

RESTORATION NOTE:
ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF THE CITY OF LONDON ENVIRONMENTAL AND ENGINEERING SERVICES DEPARTMENT. THE STANDARD CONTRACT DOCUMENTS FOR MUNICIPAL CONSTRUCTION PROJECTS AS ADOPTED BY COUNCIL ON MAY 30, 1994 AND AS AMENDED FROM TIME TO TIME ARE TO BE APPLIED TO WORKS WITHIN THE CITY ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE CITY.

SILT SACKS (OR APPROVED EQUAL) SHALL BE INSTALLED AND MAINTAINED IN EXISTING CB's AND CICB'S FOR DURATION OF PROJECT UNTIL SURFACES ARE PAVED AND BOULEVARDS ARE SODDED.

SILT FENCE TO BE CONSTRUCTED ON PROPERTY LINE. LINE WORK IS SHOWN AS OFFSET FOR CLARITY.

OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR MONITORING & CLEANUP OF TRACKED MUD/DEBRIS ON ADJACENT LANDS & PUBLIC ROADS TO THE SATISFACTION OF THE ENGINEER/CITY OF LONDON.

OWNER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO AVOID MIXING TOPSOIL WITH SUBSOIL, WHERE REQUIRED FOR REUSE ON–SITE.

SITE PREPARATION NOTE:
THIS PLAN HAS BEEN PREPARED TO IDENTIFY REMOVALS, EROSION & SEDIMENT CONTROL MEASURES AND TEMPORARY CONSTRUCTION WORKS FOR THE BENEFIT OF THE OWNER'S CONTRACTOR IN ADVANCE OF SERVICING WORKS. IT IS NOT INTENDED TO IDENTIFY PERMANENT GRADING PATTERNS.

STORM DRAINAGE NOTE:
STORM DRAINAGE MAY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM STORM SEWER SYSTEM. ANY SUCH TEMPORARY MEASURES SHALL BE CONDUCTED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON THE OWNER'S CONTRACTOR'S WATER CONTROL PLANS. WHICH MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUCTION.

UNLESS OTHERWISE NOTED ON THE PLANS, GEOTEXTILE SHALL BE NON–WOVEN TO MEET CLASS 2–OPSS.MUNI 1860.07.02 (I.E. TERRAFIX 270R, OR APPROVED EQUAL) WITH 300mm MIN. OVERLAPS.

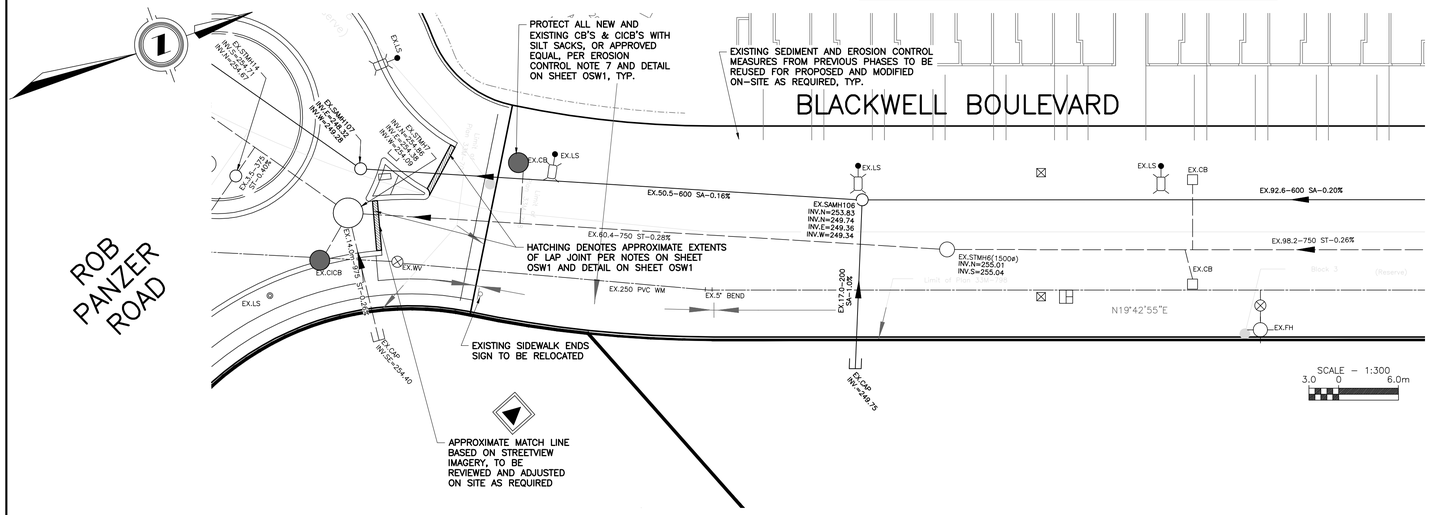
THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 FOR ALL WORKS WITHIN THE CITY RIGHT–OF–WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE CITY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET OSW1, WHICHEVER IS GREATER, ALL AT NO COST TO THE CITY.

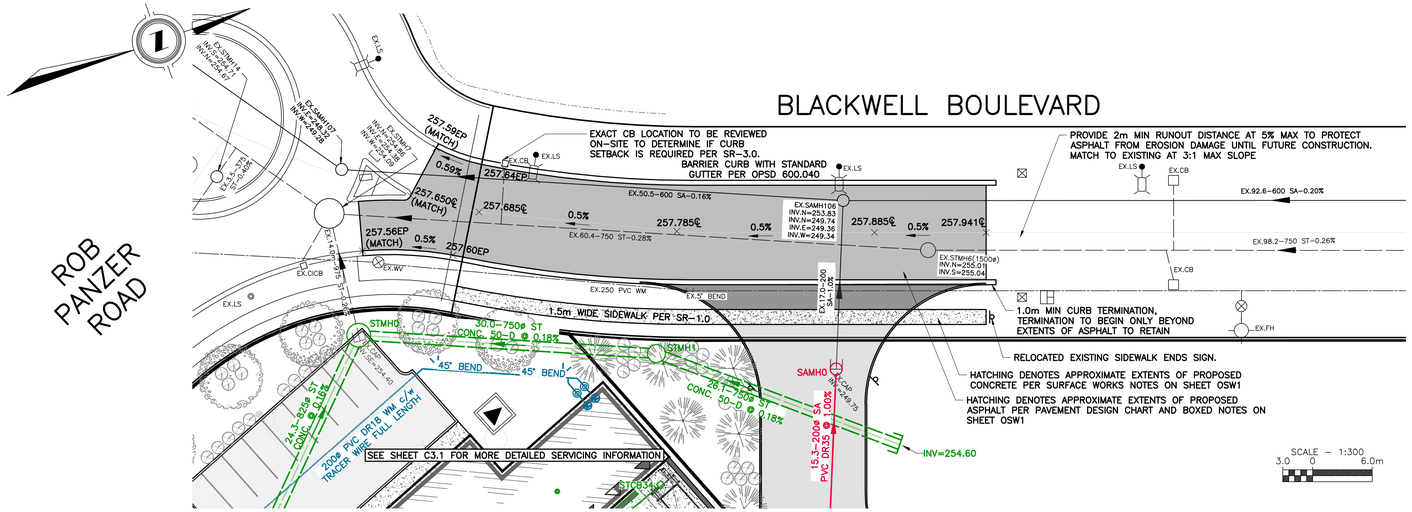
DISPOSAL NOTE:
ALL ITEMS NOTED AS "TO BE REMOVED" SHALL BE DISCARDED OFF–SITE AT AN APPROVED FACILITY.

TOPSOIL STOCKPILE SIZES/LOCATIONS TO BE DETERMINED IN THE FIELD. SILT FENCE SHALL BE CONSTRUCTED AT TOE OF DOWNGRADE EDGES OF TOPSOIL STOCKPILE

OWNER'S CONTRACTOR TO CLEAR AND GRUB SITE PRIOR TO CONSTRUCTION AND DISPOSE OF ALL DEBRIS AND EXCESS FILL/TOPSOIL OFF–SITE AT AN APPROVED FACILITY.



BLACKWELL BOULEVARD - EXISTING EXTERNAL CONDITIONS & REMOVALS



BLACKWELL BOULEVARD - PROPOSED EXTERNAL CONDITIONS & REMOVALS

TRAFFIC MANAGEMENT NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ALL TRAFFIC SIGNAGE THROUGH THE DURATION OF THE PROJECT (AS NECESSARY)
2. NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR SHALL VERIFY LOCATES PRIOR TO UNDERTAKING WORK.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL SERVICES AND UTILITIES ADJACENT TO THE WORK ZONE PRIOR TO COMMENCEMENT OF CONSTRUCTION. SHOULD ANY DISCREPANCIES BE DISCOVERED IN RELATION TO THE CONTRACT DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
4. THE CONTRACTOR SHALL RESTORE ALL FINISHED SURFACES DISTURBED DURING CONSTRUCTION TO EXISTING CONDITIONS OR BETTER.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES FOR THE PERMIT OF APPROVED WORKS.
6. CONTRACTOR TO COMPLY WITH THE MINISTRY OF LABOUR DIRECTIVES AND ONTARIO TRAFFIC MANUAL BOOK 7 AS A MINIMUM FOR SITE SPECIFIC TRAFFIC CONTROL.
7. ALL WORKS SHALL BE CONDUCTED WITHIN THE MINISTRY OF LABOUR, OPSS AND MINISTRY OF TRANSPORTATION STANDARDS
8. CONTRACTOR MUST PROVIDE A MINIMUM OF 2 WEEKS NOTICE OF LANE CLOSURES TO THE LONDON TRANSIT COMMISSION (LTC) PRIOR TO CONSTRUCTION DUE TO THE PROXIMITY TO TRANSIT ROUTES.

SITE BENCHMARK:

SITE BENCHMARK #1

MONUMENT TYPE: BOLT

LOCATION: NORTH PARK COMMUNITY CHURCH NO1510 FANSHAWE PARK ROAD EST. BOLT SET IN THE SOUTHWEST FACE OF THE TWO STOREY SECTION ON THE WEST SIDE, 1.48m OF THE NORTHWEST CORNER AND 0.05m DOWN FROM THE BRICK.

GEODETIC ELEVATION: 260.029m

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

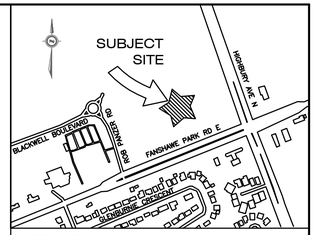
SITE BENCHMARK #2

MONUMENT TYPE: BOLT

LOCATION: CONCRETE BOX CULVERT CROSSING SUNNINGDALE ROAD EAST, 320m WEST OF THE CENTERLINE OF HIGHBURY AVENUE NORTH. BOLT SET IN THE EAST FACE ON THE NORTH SIDE OF SUNNINGDALE ROAD EAST, 0.12m. SOUTH OF THE NORTHEAST CORNER AND 0.12m DOWN FROM THE TOP.

GEODETIC ELEVATION: 260.902m

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

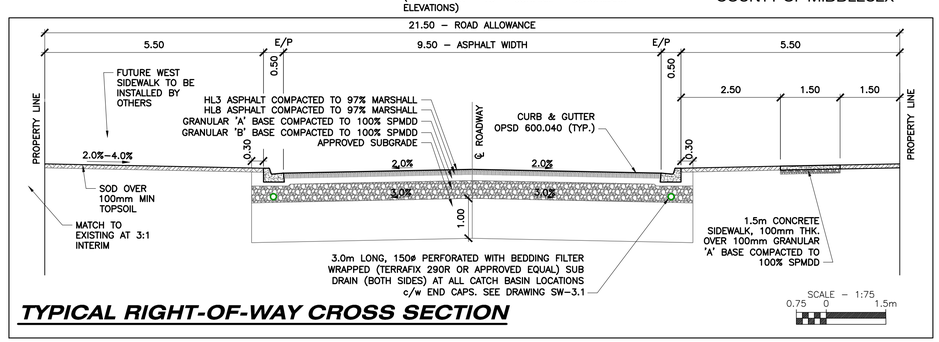


KEY PLAN

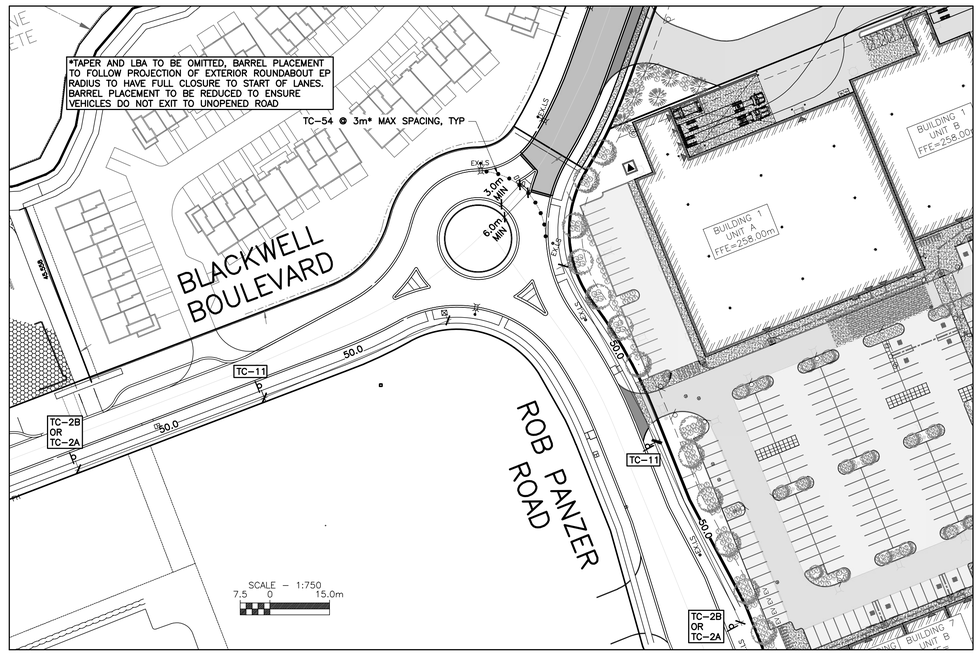
N.T.S.

LEGAL INFORMATION

PART OF
LOT 9, CONCESSION 5
IN THE
CITY OF LONDON
COUNTY OF MIDDLESEX



TYPICAL RIGHT–OF–WAY CROSS SECTION



ROUNDABOUT LANE ENCROACHMENT

REFERENCE: ONTARIO TRAFFIC MANUAL APRIL 2022––BOOK7
SHORT DURATION (<24 HOURS ANTICIPATED) AT SPEED OF 50 KM/H (TABLE A)
FIGURE: TS–7 *MODIFIED

REFER TO NOTES, LEGEND, AND DETAILS ON SHEET OSW1

AS CONSTRUCTED SERVICES	COMPLETION

DESIGN	JSF		
DRAWN	JSF		
CHECKED	LS		
APPROVED	HA		
DATE	23/02/2024		
CAD	22–1747		

No.	REVISIONS	D/M/Y	BY
1	ISSUED FOR SITE PLAN APPROVAL 3	06/10/23	FZ
2	ISSUED FOR SITE PLAN APPROVAL 4	30/11/23	FZ
3	ISSUED FOR SITE PLAN APPROVAL 5	27/02/24	FZ
7	ISSUED FOR SITE PLAN APPROVAL 6	22/03/24	FZ
8	ISSUED FOR SITE PLAN APPROVAL 7	30/04/24	FZ
9	ISSUED FOR TENDER	01/05/24	FZ

CONSULTANT
STRIK BALDINELLI MONIZ
PLANNING • CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8
Tel: (519) 471–6667 Fax: (519) 471–0034
Email: sbm@sbmltd.ca

ENGINEER'S STAMP
LICENSED PROFESSIONAL ENGINEER
May/01/24
H. AHMAD
100507781
PROVINCE OF ONTARIO

ENGINEER'S STAMP

CLIENT
STONEY CREEK COMMONS INC
1701 RICHMOND CREEK COMMONS INC.
LONDON, ON
N5X 3Y2
P: 519–850–0000
E: INFO@WESTDELLCORP.COM

SCALE
AS NOTED

TITLE
OFF–SITE WORKS PLANS
PROPOSED COMMERCIAL DEVELOPMENT
1300 FANSHAWE PARK ROAD EAST
LONDON, ON.

PROJECT No. SBM–22–1747
SHEET No. OSW2
PLAN FILE No. SPA23–031

GEOTECHNCIAL INVESTIGATION
REPORT # 2382

1300 Fanshawe Park Road East,
London, Ontario

Prepared by:
GSPrimo Design Inc.
London, ON, N6G 5E8
Cell: 519-871-3234
Tel: 226-503-3231
mheidari@gsprimo.com
www.gsprimo.com

March 20, 2024

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1.0 INTRODUCTION

GSPrimo Design Inc. (“GSPrimo”) was retained by Westdell Development Corp (the “Client”) to perform a geotechnical investigation for a proposed commercial development within a site (“Site”) located at 1300 Fanshawe Park Rd W, London, Ontario.

The purpose of this investigation was to determine the subsurface conditions at the Site by advancing seventeen (17) boreholes and associated laboratory testing. Based on the information obtained, geotechnical recommendations were provided for the design of foundation, site grading operations, site servicing, and pavement design.

The report addresses only the geotechnical aspects of the subsurface conditions. The information in this report is specific to the scope of this investigation and the scope of the proposed development and should not be used for any application or purpose other than that stated herein. Particularly, the hydrogeological and geo-environmental components are beyond the scope of this report.

The number of boreholes were selected to provide representative information sufficient to determine parameters needed for design, specifications, and construction of the proposed development. Conditions elsewhere near or beneath the footprint of the structures may be found to differ, during construction, from those at the borehole locations. Should this occur, the contractor should contact the design engineer for recommendations as how to best proceed and what changes if any, should be made.

2.0 PREVIOUS INVESTIGATIONS

Two previous investigations were conducted for the Site. Thorough examination was undertaken on reports from Trow Associates Inc. (now EXP) and EXP to gather relevant information about the Site. The reports and key details include:

- EXP Services Inc. "*Geotechnical Investigation: proposed commercial development Highbury Avenue North, London, Ontario*". EXP/TROW job number L06689AGI. September 2006.
    - Excavations were made in sixteen (16) test pits, reaching depths ranging from 2.4 to 4.0 meters. The soil stratigraphy observed in the test pits included topsoil and/or sand fill, transitioning to medium-grained sand with some gravel and occasional cobbles. Some test pits extended to clayey silt till.
- EXP Services Inc. "*Geotechnical Investigation: 1454 Highbury Avenue North, London, Ontario*". EXP job number LON-00018180-GE. August 2020. Located adjacent east of the Site.
    - Fieldwork encompassed the drilling of six (6) boreholes, reaching depths of 6.6 to 9.6 meters below ground surface. Measurement of the stabilized groundwater table depth was omitted due to time constraints. Boreholes were dry upon completion, but wet seams and layers were noted at depths of 1.5 to 6.1 meters below ground surface. The general stratigraphy comprised topsoil, sand/sand and gravel, and clayey silt extending to the borehole termination.

3.0 DESCIPRTION OF SITE AND PROJECT

3.1 Existing Conditions

The Site is a 108,685.5 m^2 parcel of land with a rectangular shape, situated at the northwest corner of the intersection of Fanshawe Park Road East and Highbury Avenue North in the City of London, Ontario. The approximate UTM coordinates for the site are Zone 17T, with an easting of 481347 m and a northing of 4765666 m.

At the time of the site visit, the property was vacant land with no structures present. The property had been graded and some fill piles and ponded water were present on Site. There were no existing structures on the site. The property is bordered by Fanshawe Park Road East to the north, Highbury Avenue North to the east, vacant land to the north, and Rob Panzer Road to the west followed by a commercial lot, as illustrated in Figure 1.

3.2 Proposed Development

Our understanding of the proposed site development indicates the following key features:

- The development will comprise seven 1-story and 2-story commercial buildings designated as Building 1 to 7, without an underground level, with a total gross floor area of 13,368.2 m^2.
- Parking spaces will be provided in the asphalt area, encompassing a total area of 23,112.9 m^2 surrounding the proposed buildings.
- The landscape area will cover a total area of 71,904.4 m^2.
- Access to the site will be facilitated through four entry points: one off Fanshawe Park Road East, one off Rob Panzer Road, one off Highbury Avenue North, and another off a proposed road to the north.

The overall layout of the proposed development is depicted in Figure 2, found in Appendix A.

3.3 Topography and Drainage

In the 500-meter radius of the "Study Area", a topographic map from Natural Resources Canada's Geological Survey displays elevations ranging from approximately 260 meters above sea level

(masl) in the east-northeast to 255 masl in the west-northwest, sloping towards the north-northwest. Surface water is anticipated to either infiltrate the permeable green area or flow over the ground towards Stoney Creek, located to the north of the property (refer to Figure 3).

In August 2021, LDS Consultants Inc. ("LDS") conducted a topographical survey of the Site. The Site was primarily level with a gentle slope towards the west-northwest. Along the Site's eastern boundary, elevations ranged from 259 meters above sea level (masl) in the north to 260 masl in the south. The western boundary displayed elevations ranging from 258 masl in the north to 257 masl in the south (refer to Figure 4). In recent years, the property had been graded, and some fill piles are present within the northwest portion of the Site.

3.4 Physiography

The physiography of southern Ontario was altered considerably by the glacial and interglacial episodes that took place throughout the Quaternary period (2 million years to present). The last continental scale glaciation in southern Ontario was during the Wisconsinan Ti me. When the glaciers began to retreat during the late Wisconsin glacial period, the melting glaciers released enormous amounts of water. Rivers, lakes and spillways created by the meltwater from the melting glaciers deposited massive amounts of glacial debris and shaped the landscape of Southern Ontario.

According to physiographic mapping for Southern Ontario (Chapman & Putnam, 2007), the Site is located within a region known as Stratford Till Plain. This physiographic landform is specifically categorized as Spillways.

3.5 Geology and Stratigraphy

The Ministry of Northern Development Mines and Forestry offers a feature for Google Earth™ that maps various geological types for Ontario:

- The "Surficial Geology" of the site is mainly characterized by Glaciofluvial deposits, specifically gravelly deposits comprised of river deposits and delta topset facies.
- The “Paleozoic Geology” of the Site can be described as Dundee Group, consisting of

mainly of limestone, minor dolostone; locally cherty.

- The "Quaternary Geology" of the site can be classified as Tavistock Till, which were formed during the Pleistocene period. These deposits mainly consist of sandy silt to silt matrix, silty clay matrix in south and in north, moderate to high carbonate content, clast content decreases from moderate to poor northward.
- The "Bedrock Geology" identifies the Site as being within the Dundee Formation, which is composed of limestone, dolostone, and shale.

4.0 INVESTIGATION PROCEDURES

4.1 Field Work

Prior to the commencement of the field work, GSPrimo personnel laid out the locations of the investigation boreholes based on coordinates derived from the provided site plans. Figure 5 in Appendix A depicts the locations of the boreholes. GSPrimo also obtained ground clearances from public and private underground utility locators.

The field drilling program was carried out On December 22 and 23, 2023. A total of seventeen boreholes designated as Borehole BH-1 to BH-17 were advanced to a maximum depth of 6.1 meters below ground level (mbgl). The boreholes were advanced using a Geoprobe 7822DT rig operated by Arrow Drilling Inc. Standard penetration tests (SPTs) were conducted at frequent depth intervals in accordance with ASTM Standard D1586-11, and the results are shown on the borehole logs as N-values. Throughout the drilling process, the team utilized split spoon samplers to perform standard penetration tests and collect soil samples from the boreholes. The locations of the boreholes in relation to the proposed development are depicted in Figure 6 of Appendix A.

The detailed stratigraphy of each borehole, which provides information about the subsurface layers encountered during drilling, is presented in Appendix B. The borehole log information in Appendix B offers a comprehensive understanding of the soil composition, depth of different strata, and other geological features observed in each borehole.

Groundwater observations were carried out in the boreholes prior to backfilling. The boreholes were backfilled upon completion of drilling in accordance with Ontario Regulation 903. The observations are summarized in the appended borehole logs.

The field work was monitored by an engineer of GSPrimo, who directed the drilling and sampling procedures, logged the boreholes, and examined and cared for the recovered soil samples. The samples obtained from the in-situ tests were identified in the field, placed in moisture-proof bags, appropriately labelled, and subsequently transported to a geotechnical laboratory for further examination and testing.

4.2 Laboratory Testing

Select samples recovered from the geotechnical investigation were submitted to Geotrust Engineering Ltd. ("Geotrust"), a certified geotechnical and materials testing laboratory. Samples submitted for analysis are to be representative of the boreholes and their location within the proposed development.

The laboratory test results are detailed in the main body of this report. Appendix C contains the outcomes of the Moisture Content test, Grain Size Distribution, and Atterberg Limit tests.

5.0 SUBSURFACE CONDITIONS

Details of the subsurface conditions encountered during the drilling program are summarized on the borehole logs presented in Appendix B. The stratigraphy in each borehole was recorded in the field at regular intervals and samples collected by the GSPrimo personnel.

The logs include textural descriptions of the subsoil and groundwater conditions and indicate the soil boundaries inferred from non-continuous sampling and observations during drilling. These boundaries reflect approximate transition zones for the purpose of geotechnical design and should not be interpreted as exact planes of geological change. The compactness condition or consistency of the soil strata has been inferred from the In-Situ test results.

5.1 Subsurface Stratigraphy

The boreholes were advanced through the existing vacant area within the footprint of the proposed buildings, parking areas, or access road. All boreholes were terminated due to being below the intended foundations of the proposed development. Bedrock was not encountered during the field investigation to the maximum termination depth of 6.1 mbgl in any of the boreholes. Details of the encountered materials are provided in the following:

- **Topsoil**

  All boreholes encountered a layer of topsoil at the ground surface. The thickness of the topsoil layer ranged from approximately 0.2—0.3 m. The topsoil was dark brown in colour, moist and had no odour in any of the boreholes.

- **Silty Sand/Sandy Slit Till**

  A layer of Silty Sand and/or Sandy Silt Till deposit with some Clay and trace Gravel underlaying the topsoil layer was encountered from a depth of 0.2—0.3 mbgl to an approximate depth of 1.5—2.5 mbgl in all of the boreholes. This was medium brown or gray in colour, moist to wet and had no odour in any of the boreholes. The SPT-N values within major stressing zone vary from 7 to 47 blows/foot. Based on the laboratory and in-situ test results, the soil of this composition will behave geotechnically like a loose to dense cohesionless soil.

- **Sand/ Gravelly Sand**

  A layer of Sand and/or Gravelly Sand deposit spreads across the Site, underlying the Sandy Silt/Silty Sand till layer in all of the boreholes. This layer was encountered in each borehole at an approximate depth of 1.5-2.5 meters below ground level (mbgl) to the termination depth. The Sand deposit ranged from medium to coarse, with some Silt, Gravel, and Cobbles. It was light to medium brown in color, dry to moist, and had no odor in any of the boreholes. The SPT-N values within the major stressing zone varied within a wide range from 5 to 68 blows/foot. The deepest boreholes were terminated within this layer due to being below the influence zone of the intended foundations. Based on the laboratory and in-situ test results, the soil of this composition will behave geotechnically like a loose to dense cohesionless soil.

The summary of the SPT test results, showcasing the variation of N-values with depth, is presented in Tables 1 to 3. Based on the in-situ testing measurements, the cohesionless soil of generally compact to dense in compactness condition was generally observed within the major stressing zone of the foundations for the proposed development.

Table 1 – Variation of N-Values With Depth

Depth (mbgl)		BH-1	BH-2	BH-3	BH-4	BH-5
Top Elev.	Bot. Elev.	SPT N-values (blows/300 mm penetration)				
0	0.61	22	17	17	11	17
0.76	1.37	16	14	19	26	21
1.52	2.13	12	18	47	14	15
2.29	2.90	22	28		33	27
3.05	3.66	13			38	12
3.81	4.42	24			46	18
4.57	5.18	26				27
5.33	5.94	35				

Table 2 – Variation of N-Values With Depth

Depth (mbgl)		BH-6	BH-7	BH-8	BH-9	BH-10
Top Elev.	Bot. Elev.	SPT N-values (blows/300 mm penetration)				
0	0.61	21	15	27	15	22
0.76	1.37	19	36	14	15	20
1.52	2.13	7	27	23	14	19
2.29	2.90	27	12	12		
3.05	3.66	19	5	32		
3.81	4.42	4	26	68		
4.57	5.18	5	28	45		
5.33	5.94	46				

Table 3 – Variation of N-Values With Depth

Depth (mbgl)		BH-11	BH-12	BH-13	BH-14	BH-15	BH-16	BH-17
Top Elev.	Bot. Elev.	SPT N-values (blows/300 mm penetration)						
0	0.61	12	11	26	7	6	19	8
0.76	1.37	23	9	24	9	19	16	20
1.52	2.13	27	21	16	14	11	19	24
2.29	2.90		13		15	21	28	14
3.05	3.66		15		13	21	20	48
3.81	4.42		44		13	14	17	3
4.57	5.18		39		19	20	31	20
5.33	5.94				33			25

5.2 Groundwater Conditions

During the time of our drilling, the water level was not found in any of the boreholes. Short-term groundwater level observations, recorded by EXP in open test pits and boreholes (April/May 2002), indicated that water levels fluctuated between elevations of 1.5 to 3.0 mbgl, corresponding to 250.5 to 253.0 masl. In addition, three monitoring wells were installed by EXP within the annulus of their boreholes designated as BH 101 (located off-site northeast of the Site), BH 103 (located on-site close to BH-4), and BH 104 (located on-site close to BH-14). EXP recorded water table readings in the monitoring wells between April 3, 2002, and April 9, 2002, which are summarized in Table 4. The water table was identified at an approximate depth of 1.5 to 4.3 mbgl, corresponding to 250.5 to 251.7 masl.

Note that seasonal variations in the water table should be anticipated, with higher levels occurring during wet weather conditions and lower levels occurring during dry weather conditions. Capillary rise effects should also be anticipated in fine-grained soil deposits. Additionally, underground infrastructure and building foundation drains can lower the water table in localized areas. Nearby construction dewatering can also temporarily lower water levels.

Table 4 – Monitoring Well Details

Monitoring Well Label	Location	03-Apr-02		09-Apr-02	
		Depth to Water (mbgl)	Water Elevation (masl)	Depth to Water (mbgl)	Water Elevation (masl)
BH 101	off-site northeast of the Site	3.00	253.00	2.37	253.63
BH 103	on-site close to BH-4	1.50	250.50	1.55	250.45
BH 104	on-site close to BH-14	3.00	253.00	4.27	251.73

6.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS

6.1 Foundation Design Recommendations

In accordance with the 2010 National Building Code of Canada (NBCC), the use of Limit States Design (LSD) is required for the design of buildings and their structural components including foundations. The limit states of LSD design are classified into two groups: the Ultimate Limit States (ULS) and the Serviceability Limit States (SLS). The recommended geotechnical resistances for the building foundations are presented for ULS and SLS conditions.

For foundation design this ultimate resistance value is reduced using a Geotechnical Resistance Factor, Φ, which is based on the reliability index of the geotechnical data used to determine the ultimate resistance for the foundation loading case. The resistance factor values presented on Table 5 should be used for foundation design.

Table 5 – Geotechnical Resistance Factors for Foundations

Geotechnical Case	Resistance Factors, Φ
SHALLOW FOUNDATION	
Vertical resistance by semi-empirical analysis and in-situ test data	0.5
Horizontal resistance against sliding (based on friction)	0.8
DEEP FOUNDATIONS (PILES)	
Vertical resistance by semi-empirical analysis and in-situ test data	0.4
Vertical resistance from analysis of dynamic monitoring results	0.5
Vertical resistance from analysis of static load test results	0.6
Uplift resistance by semi-empirical analysis and in-situ test data	0.3
Uplift resistance from analysis of static load test results	0.4
Lateral load resistance	0.5

The values given for SLS geotechnical resistances are based on settlement values of less than 25 mm. Total differential settlements within a building should also be less than 19 mm.

The recommended geotechnical resistances for the building foundations are presented for Ultimate Limit State (ULS) and Serviceability Limit State (SLS) conditions. Given the conditions

encountered in the boreholes, the use of conventional spread or strip footing should provide a practical approach for the proposed buildings. The bearing capacity for a shallow spread foundation in the soil is calculated for a square footing with a minimum width of $B = 1.0\ m$. The proposed buildings may be designed for a factored ultimate bearing resistance of 345 kPa at ULS and a bearing resistance of 190 kPa at SLS (assuming 25 mm of settlement) on spread footing.

The bearing capacity for a strip footing in the soil is calculated for a footing with a minimum width of $B = 0.75\ m$. The proposed buildings may be designed for a factored ultimate bearing resistance of 260 kPa at ULS and a bearing resistance of 145 kPa at SLS (assuming 25 mm of settlement) on strip footing.

The recommended soil resistance values are determined under the assumption that all proposed buildings, with the exception of Building 2, will be built upon natural soil at approximately 1.2 meters below the final grade. However, for Building 2, the foundation may rest on natural soil at approximately 1.5 meters below the final grade. Should there be a consideration for raising the foundation level, engineered fill will be necessary to ensure proper support. This engineered fill must adhere to approved OPSS Granular A standards or equivalent materials, compacted to 100% SPMDD. The proof-rolled and compacted surface of the existing native soils will serve as a suitable base for the placement and compaction of the engineered fill.

Factored geotechnical bearing resistance at ULS is calculated by applying the geotechnical resistance factor of $\Phi = 0.5$ for shallow foundation designs. The un-factored horizontal resistance of the shallow foundations to sliding can be calculated using the following un-factored coefficient of friction:

- 0.30 between new engineered fill consisting of OPSS Granular A or B (Type II) and precast concrete.
- 24 kPa adhesion between precast concrete and the firm to stiff to cohesive soil. In accordance with Table 5, a resistance factor against sliding of $\Phi = 0.8$ should be applied to obtain the resistance at ULS.

Prior to pouring concrete for the footings, the footing subgrade should be cleaned of all

deleterious materials such as topsoil, fill, softened, disturbed or caved materials, as well as any standing water. If construction proceeds during freezing weather conditions, adequate temporary frost protection for the footing bases and concrete must be provided. Native soils and engineered fill materials tend to weather rapidly and deteriorate on exposure to the atmosphere and surface water. Hence, foundation bases which remain open for an extended period of time should be protected by a skim coat of lean concrete. It is recommended that all excavated footing bases must be evaluated by a qualified geotechnical engineer to ensure that the founding soils exposed at the excavation base are consistent with the design bearing pressure intended by the geotechnical engineer.

For any shallow structures, all exterior foundations and foundations in unheated areas must be provided with a minimum soil cover of 1.2 m or equivalent insulation for frost protection. The foundation depths recommended below are with respect to final grading levels. A perimeter drain tile, leading to an outward discharge, should be placed at the exterior face of the foundation wall where any high-water table can cause freeze thaw damage or unacceptable infiltration to the foundation.

Backfilling of foundations shall be carried out with approved OPSS Granular B material provided. It can be placed in maximum 300 mm loose lifts and compacted to a minimum of 98% SPMDD. Filling should continue until the design subgrade elevations are obtained.

The exposed subgrade should be proof-rolled to minimize differential settlement and to increase the bearing capacity. During the excavation, if loose material is found at the foundation level, the contractor is to remove all the loose material (until the dense soil is reached) and replace it with engineering fill granular material. Given this scenario, a conventional spread footing placed at this level should be founded on engineered fill if it is to have appropriate support. This engineered fill must consist of approved OPSS Granular A or equivalent materials compacted to 100% SPMDD. A grade raise may be considered. If this is the case, the proof-rolled and compacted surface of the existing native soils will provide a satisfactory base for the placement and compaction of the engineered fill. Full-time supervision and in-situ density testing should be carried out by a geotechnical engineer during placement of engineered fill beneath all structures

and settlement sensitive areas.

6.2 Slab-On-Grade Floor Using Engineered Fill

Prior to construction of the floor slab, all topsoil, construction debris and deleterious materials must be removed from the ground surface. The floor area should then be raised to within 200 mm underside of the floor slab using OPSS Granular B engineered fill or equivalent, placed in maximum 300 mm loose lifts and compacted to 98% SPMDD. To create a stable working surface and to distribute loadings, compacted OPSS Granular A or equivalent should be placed over the Granular B materials, below all floor slabs. The compacted OPSS Granular A or equivalent should be 200 mm thick at minimum, compacted to 100% SPMDD.

Floor slabs below unheated buildings or equipment should be provided with adequate insulation to prevent cracking from potential frost heave unless the compacted Granular A base is placed on clean limestone bedrock. A 100 mm thickness of high-density Styrofoam insulation, extending horizontally 1.8 m beyond the building/slab footprint, should be adequate to prevent frost heave where necessary.

For preliminary design, the module of vertical subgrade reaction (K_s) for granular material over the encountered subgrade materials is approximated to be $20\ MN/m^3$. This value should be modified by appropriate shape and depth factors to determine the vertical sub grade modulus (K_s) for slabs and bases.

6.3 Seismic Considerations

The parameters for determination of the Site Classification for Seismic Site Response are set out in Table 4.1.8.4.A of the 2012 Ontario Building Code (OBC). The classification is based on the determination of the average shear wave velocity in the top 30 metres of the site stratigraphy, where shear wave velocity (V_s) measurements have been taken. In the absence of such measurements, the classification is estimated on the basis of empirical analysis of un-drained shear strength or penetration resistance. The applicable penetration resistance is that which has been corrected to a rod energy efficiency of 60% of the theoretical maximum or the (N_{60}) value.

Based on the SPT-N values from borehole information, the subsurface stratigraphy generally comprises of stiff soil. On this basis, the site designation for seismic analysis is **Class D**.

If a higher site class is sought, it is recommended to carry out a site-specific shear wave velocity testing by a specialist consultant.

6.4 Lateral Earth Pressure

All below grade walls and retaining walls should be designed to withstand lateral earth pressures. The Lateral earth pressures may be calculated using the following equation:

$$p = k(\gamma h + q)$$

Where p is lateral earth pressure, k is coefficient of lateral earth pressure, γ is backfill total unit weight, h is depth from the ground surface and q is surcharge at ground surface adjacent to the wall. Recommended design values are presented in Table 6. It is expected that all below grade wall would be rigid, as such, the at-rest coefficient of earth pressure, k_0, is recommended in the calculation of the lateral earth pressures. Where some movement can be accommodated for retaining walls, the active earth pressure coefficient, k_a, can be used.

The above expression assumes that backfill consisting of free-draining granular material with a drainage system to prevent the build-up of hydrostatic pressure behind the wall. If this is not possible, then combined hydrostatic and lateral earth pressures should be applied using water unit weight of 9.8 kN/m^3.

Table 6 – Lateral Earth Pressure Parameters

Backfill Type	Lateral Earth Pressure Coefficient			Total Unit Weight, kN/m^3
	Active, K_a	At-Rest, K_0	Passive, K_p	
Granular Material	0.33	0.50	3.0	20
Lean Clay	0.53	0.69	1.9	18

Backfill behind retaining walls should consist of non-frost susceptible, free-draining granular materials in accordance with OPSD 3101.150. The granular backfill should be compacted to at

least 98% SPMDD, placed in maximum 200 mm lifts. The backfill should be brought up around the exterior of the walls as evenly as possible to prevent differential pressures.

6.5 General Site Grading

According to the proposed development plan, grading operations are expected to require 'cut and fill' procedures, resulting in an estimated elevation change of approximately 1-2 meters across the site. It is recommended to construct engineered fill in areas to be raised to suitably support the future roadway, infrastructure servicing, and lightly loaded building structures.

As of January 1, 2023, it's important to highlight the full implementation of new regulations and procedures governing excess soil management under Ontario Regulation (O.Reg.) 406/19 (On-Site and Excess Soil Management), enacted under the Ontario Environmental Protection Act (O.EPA). These regulations significantly impact the transport and re-use of excess soils off-site. For the proposed development on the Site, any soil removed should undergo analysis to determine suitable disposal or re-use options. All soil and fill material transportation off-site must adhere to Ontario Regulation 347 (as amended) and other relevant regulations, meeting the requirements of the receiving site.

Inorganic onsite native soil deposits from potential "cut" areas may potentially be reused to construct engineered fill capable of supporting building structures, infrastructure servicing and future roadways. The natural moisture content of the "cut" soils to be used as engineered fill should be within 2% below their optimum moisture contents to achieve the specified degree of compaction.

Any shortfall of fill material required for site grading operations may be made with similarly graded imported soils for the various purposes described above. It is recommended that any proposed imported source materials be tested prior to importing, in order to ensure that the environmental quality of the imported fill meets all environmental approval criteria and to ensure that the natural moisture content of the fill is suitable for compaction.

It is recommended that engineered fill construction be conducted during the summer and early fall months when drier warmer weather conditions typically exist as the onsite soils are sensitive

to moisture and will become difficult to handle and compact to the specified degree of compaction when wet.

The onsite deposits are frost susceptible. Constructing engineered fill, backfilling footings, foundation walls and service trenches using these finer grained soils during the winter months is not advisable, unless suitable weather conditions prevail, the soils are at suitable moisture content, and strict procedures are followed and monitored on a full-time basis by the geotechnical engineer.

The onsite soils are susceptible to softening and deformation when exposed to excessive moisture and construction traffic. As a result, it is imperative that the grading/filling operations are planned and maintained to direct surface water run-off to low points and then be positively drained by suitable means. During periods of wet weather, construction traffic should be directed along the designated construction routes so as not to disturb and rut the exposed subgrade soil. Temporary construction roads consisting of clear crushed material (such as crushed stone or recycled concrete) may be required during poor weather conditions such as wet spring or fall.

All imported borrow fill material from local sources should be free from organic material and foreign objects (i.e., trees, roots, debris, etc.) and should be approved by GSPrimo prior to transport to the site.

6.6 Groundwater Control or Dewatering

For foundation excavations extending below the groundwater level, it will be necessary to lower and maintain the groundwater level beneath the excavation base. Based on the results of previous geotechnical investigations, groundwater infiltration should be anticipated within building and service trench excavations, particularly below depths of about 1.5 mbgl. It is important to note that the water levels observed in the boreholes during the previous investigation by EXP in 2012 are expected to be indicative of seasonal (spring) high conditions. If required, appropriate dewatering techniques, such as a sump pump or sewer with a check valve, should be employed to ensure that the construction area remains dry. In cases where groundwater infiltration persists, more extensive dewatering measures may be necessary, and consultation with a specialist dewatering contractor is recommended.

The groundwater table must be lowered a minimum of 0.5 m below the lowest excavation elevation prior to any excavation and maintained at that level during construction. If the subgrade soils are not dewatered before excavation and maintained throughout construction, the subgrade soils will become disturbed; hence, the recommendations provided for bearing resistance will not be valid. It is recommended to engage a professional contractor to develop and implement a dewatering plan for the site. Successful dewatering operations will depend on the contractor's experience, construction technique, seasonal fluctuations, and the sequencing and scheduling of the workforce.

Perimeter foundation drains should be provided consisting of perforated pipe with filter fabric (minimum 100 mm diameter) surrounded by a granular filter (minimum 150 mm thick), and freely out-letting. The granular filter should consist of HL8 Coarse Aggregate or OPSS 1004 19 mm Clear Stone surrounded by a filter fabric (see Appendix D for Details). The perimeter drain installation and outlet provisions must conform to the plumbing code requirements. The size of the sump should be adequate to accommodate the anticipated ground seepage and stormwater inflow. A duplex pumping arrangement (main pump with a provision of a backup pump) on emergency backup power is recommended. The pumps should have sufficient capacity to accommodate a maximum peak flow of water. This flow is not anticipated to be a sustained flow but could be achieved under certain peak flow conditions.

6.7 Site Servicing Excavations

It is anticipated that municipal water-main and sewer servicing will generally be in the range of 2 to 4 m below final design grades. Excavation side slopes should comply with the current "Regulations for Construction Projects under the Ontario Occupational Health and Safety Act." The native or re-compacted fill soils can be generally classified as Type 3 soils. Excavation in the Type 3 soils may be sloped not steeper than 1 vertical to 1 horizontal throughout. The excavation side slopes should be suitably protected from erosion processes. For the conventional excavation depth, it is anticipated to encounter water flow into the excavation. Should unstable conditions be encountered, side slopes are to be flattened to a stable configuration. The geotechnical engineer should be retained to examine and inspect cut slopes to ensure construction safety.

6.8 Pipe Bedding

The native and re-compacted fill soil will generally provide suitable subgrade support to sewer and watermain servicing provided that the integrity of the base of the trench excavations can be maintained during construction. Any unsuitable soils exposed at the pipe subgrade should be sub-excavated and replaced with a minimum 150 mm bedding thickness of OPSS Granular A, compacted to at least 98% SPMDD. The bedding requirements for the services should be in accordance with Ontario Provincial Standard Drawings (OPSD) standards and the local town's Standards. Granular "A" should be used to backfill around the pipe to at least 150 mm above the top of the pipe. From the springline to 300 mm above the obvert of the pipe, sand cover shall be used. Particular attention should be given to ensure material placed beneath the haunches of the pipe is adequately compacted.

6.9 Backfill

Excavated inorganic materials are considered suitable for reuse as trench backfill. If necessary, potential mixing of drier and wetter excavated soils in proper ratios can be done to produce a suitable mixture at or near the optimum water content for compaction in order to achieve the required compaction specification. Conversely, judicious addition of water may be required if the soils are significantly drier than their optimum moisture content in order to facilitate suitable compaction.

Backfilling of service trenches under proposed pavement areas shall be carried out using approved imported soils or imported OPSS approved Granular B materials provided it can be placed in maximum 300 mm lifts and compacted to a minimum of 98% SPMDD. The onsite fill materials may not meet compaction requirements or may contain substantial amounts of silt or clay and therefore, are not considered suitable to be used as backfill. It is expected that most material will have to be imported. Materials such as organic soils, overly wet soils, boulders and frozen materials (if work is carried out in the winter months) should not be used for backfilling. Backfilling operations should follow closely after excavation so that only a minimal length of trench slope is exposed at any one time to minimize potential problems. This will potentially minimize over-wetting of the subgrade material. Particular attention should be given to make

sure frozen material is not used as backfill should construction extend into the winter season.

Proctor compaction tests must show that the soil is capable of being compacted to a satisfactory density; results submitted to GSPrimo for approval and then be delivered onsite within 2% of its optimum moisture content. Materials that have been imported and approved for use that are stored onsite should be maintained within 2% of their optimum moisture content. They should also be protected from the weather with tarps.

6.10 Preliminary Pavement Design

It is our understanding from the proposed development that a new access roads and parking areas will be constructed for this project. The recommended pavement structure is outlined in Table 7, based on the anticipated traffic volume and subgrade conditions. No traffic study was available at the time of this report, consequently, the recommended pavement structure should be considered for preliminary design purposes only.

It is assumed that pavement construction will be carried out under dry periods and the subgrade will be stable under the load of construction equipment. If the subgrade is unstable or wet, additional thickness of subbase course material may be required. It should be noted that the recommended pavement structure is not intended to support heavy construction vehicles such as concrete trucks. Consequently, heavy construction traffic should be limited to areas with suitable temporary access roads. The access roads shall consist of a minimum of 450 mm of stony Granular B material placed on a woven geogrid to preclude mixing of the subgrade into the Granular B. A surface coat of recycled asphalt shall be placed on the surface to provide a seal.

Table 7 – Minimum Pavement Structure Requirements

Pavement layer	Material	Local Road Thickness (mm)	Collector Road Thickness (mm)
Surface Course Asphalt	OPSS H. L3	35	50
Binder Course Asphalt	OPSS H. L8	45	60
Base Layer	OPSS Granular A	150	150
Subbase Layer	OPSS Granular B	350	400

The granular base and sub-base layers should be uniformly compacted to 100% SPMDD. The

asphalt materials should be compacted to a minimum of 92% of the Marshal Maximum Relative Density (MRD), as tested by using nuclear density gauge.

Prior to placing the pavement subbase layer, the subgrade should be prepared and heavily proof-rolled under the supervision of the geotechnical engineer. Any weak or soft areas encountered at the original surface must be further sub-excavated and replaced with suitable approved backfill compacted to 98% SPMDD to provide uniform subgrade support condition. The subgrade should be compacted to 98% SPMDD for at least the upper 500 mm. Stringent compaction and placement control procedures shall be maintained to ensure uniform subgrade moisture and density conditions are achieved.

It should be noted that even with well-compacted trench backfill, some settlement can be expected after construction. In this regard, surface course asphalt shall be placed at least one year after trench backfill is completed.

The finished pavement surface should be graded to promote runoff to designated surface drainage areas and catch basins. Subdrains should be installed to intercept excess subsurface moisture and prevent subgrade softening. To minimize problems of differential movement between the pavement and catch basins/manholes due to frost action, the backfill around the structures should consist of free draining granular. It is recommended to install longitudinal subdrain with positive drainage outlets at the subgrade level along the edges of the roadway construction. The subdrain stubs should be extended at least ten m from catch basins, along the uphill sides.

7.0 STATEMENT OF LIMITATIONS

This report has been prepared for Westdell Development Corp, who retained the services of GSPrimo to conduct a geotechnical investigation for the proposed commercial development within a property located at 1300 Fanshawe Park Road East, London, Ontario. Further dissemination of this report is not permitted without GSPrimo's prior written approval. GSPrimo has carefully assessed all information provided to them during this investigation but makes no guarantees or warranties as to the accuracy or completeness of this provided information.

The comments given in this report are intended only for the guidance of design engineers and architects. Contractors bidding on or undertaking the work, should in this light, decide that further field investigations, and interpretations of the factual borehole results are necessary to draw their own conclusions as to how the subsurface conditions may affect them. Should soil conditions during excavation for the foundations prove to be different than what have been described in this report, the author of this report should be notified as soon as possible. No liability or claims may be made by owners or third parties against GSPrimo for factors outside (GSPrimo 's) control. An independent quality control firm must be made available for all concrete and compaction testing associated with construction. All testing results should be made available to the owner, designers, consultant, and general contractor.

March 20, 2024

Mehdi Heidari, Ph.D., P.Eng.

8.0 REFERENCES

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Terzaghi, K., & Peck, R. (1967). *Soil Mechanics in Engineering Practice.* New York: John Wiley.

APPENDIX A – Site Drawings

Figure 1 – Site location map

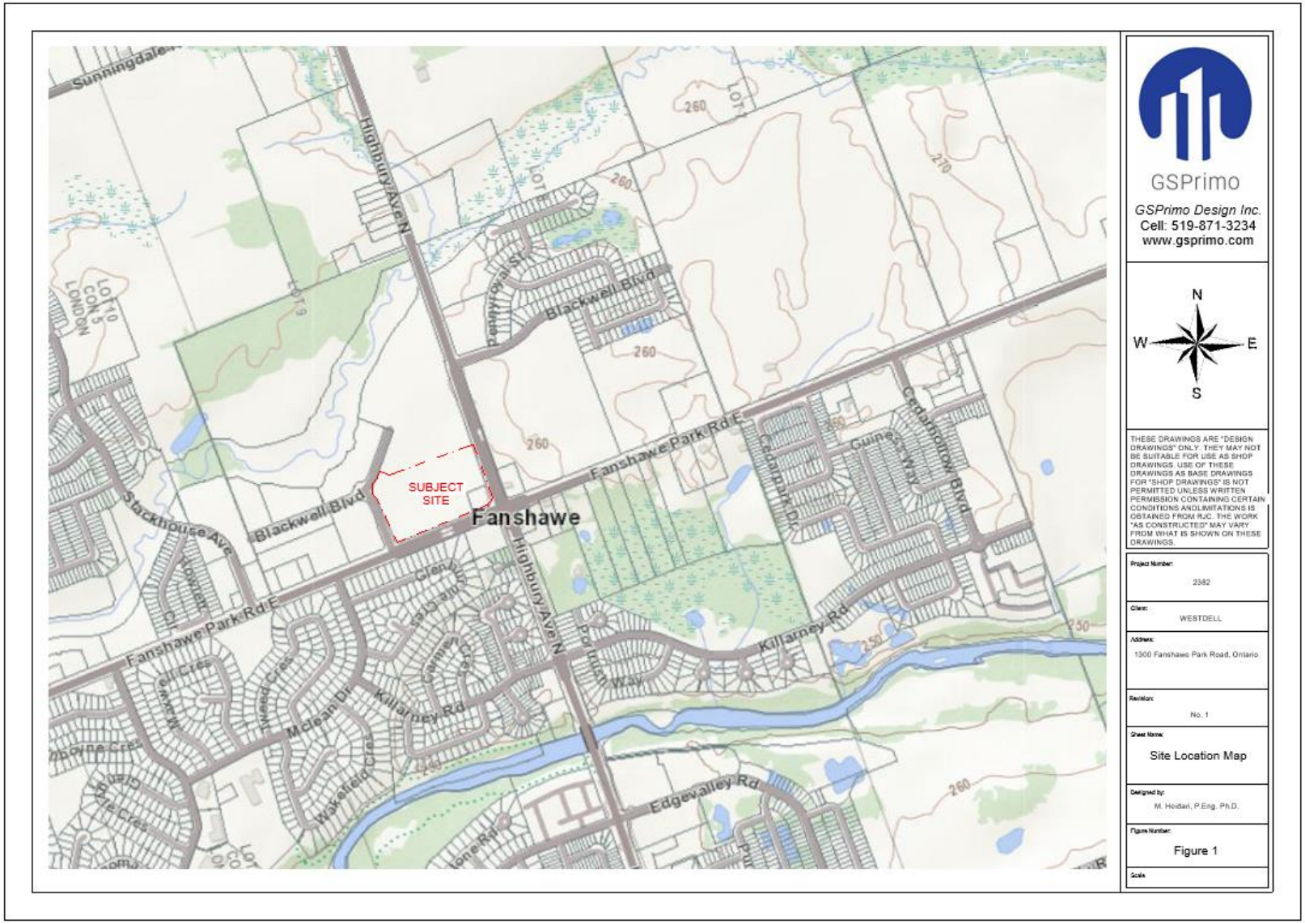

Figure 2 – Proposed development

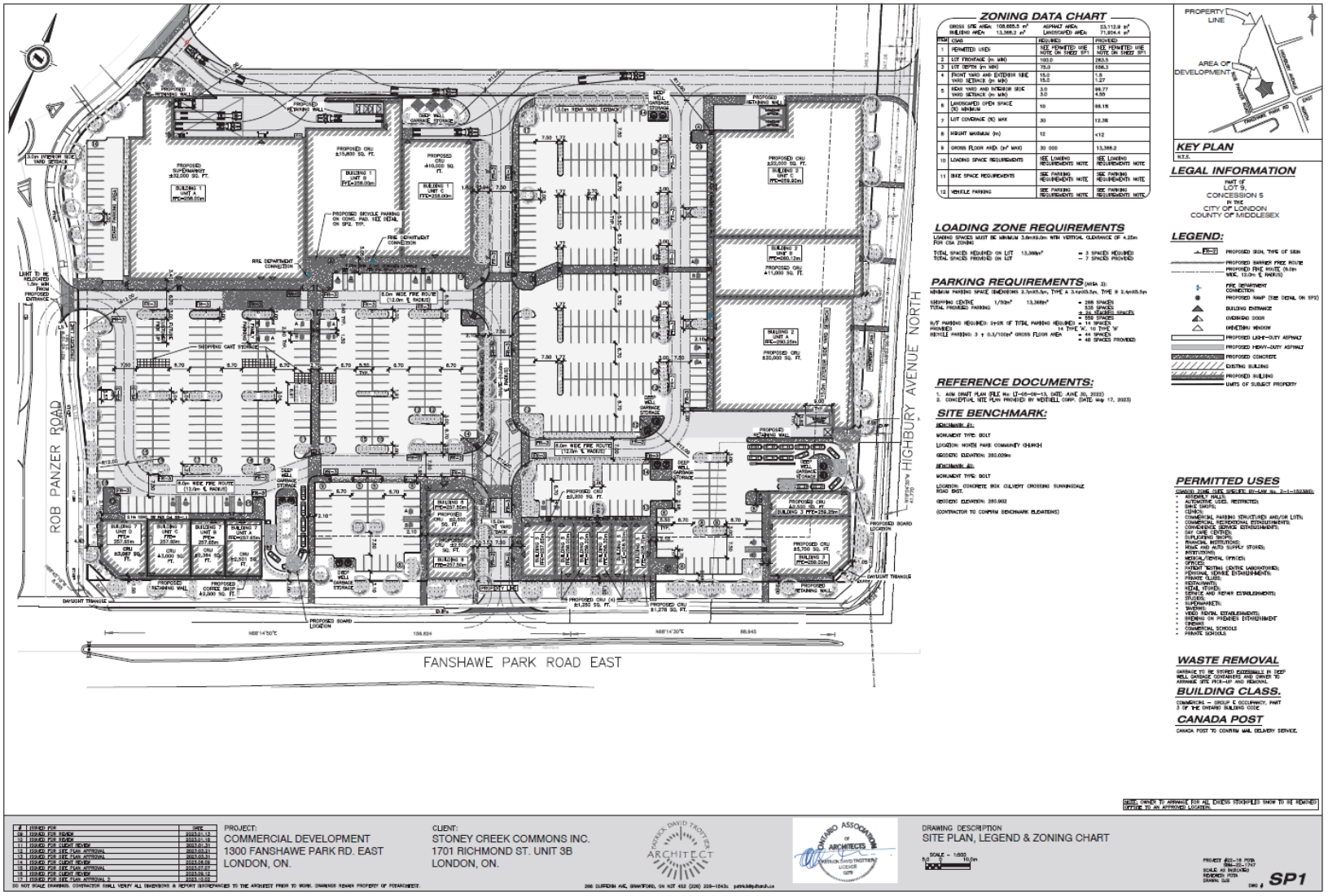

Figure 3 – Topographic map

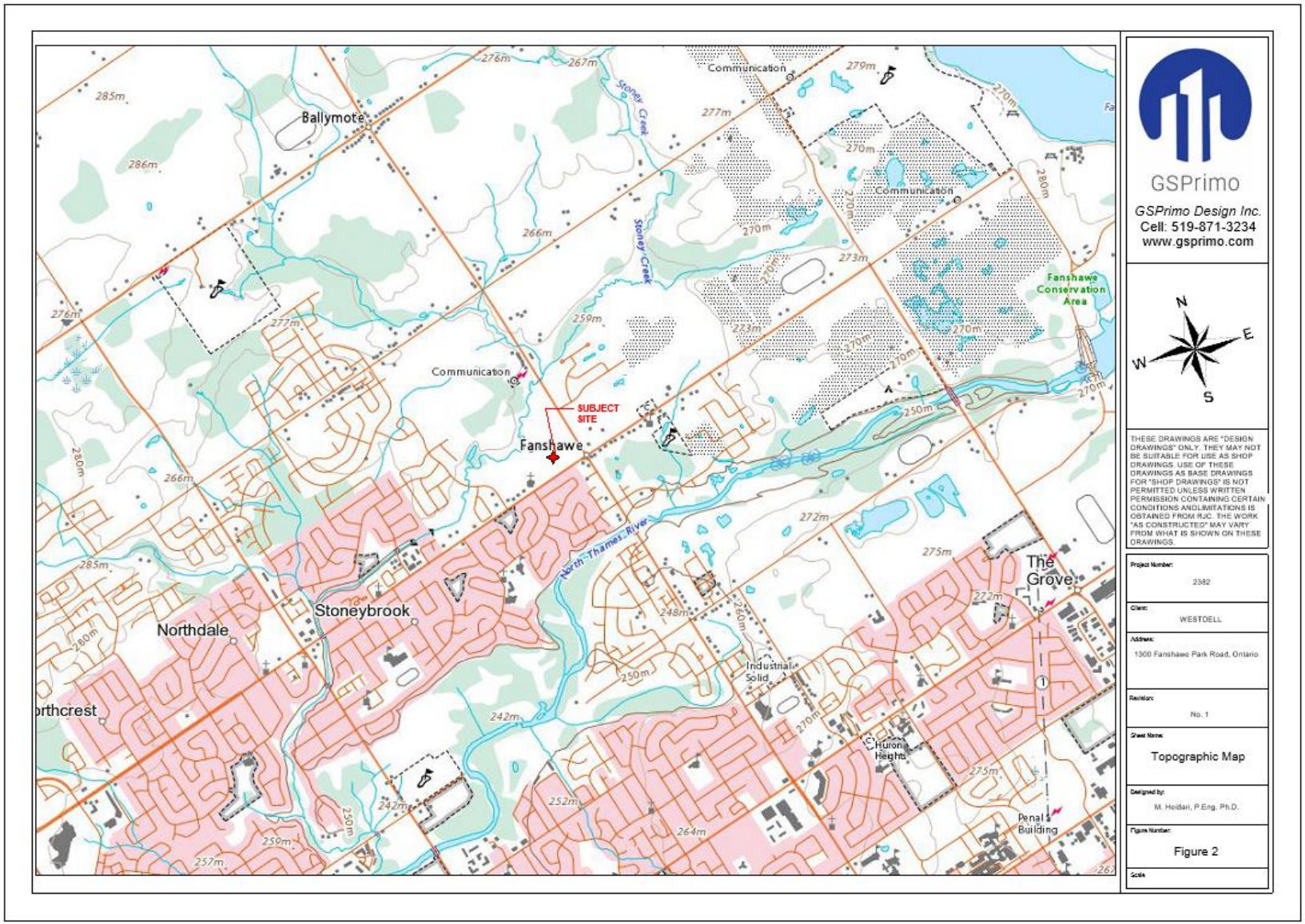

Figure 4 – Topographic Survey

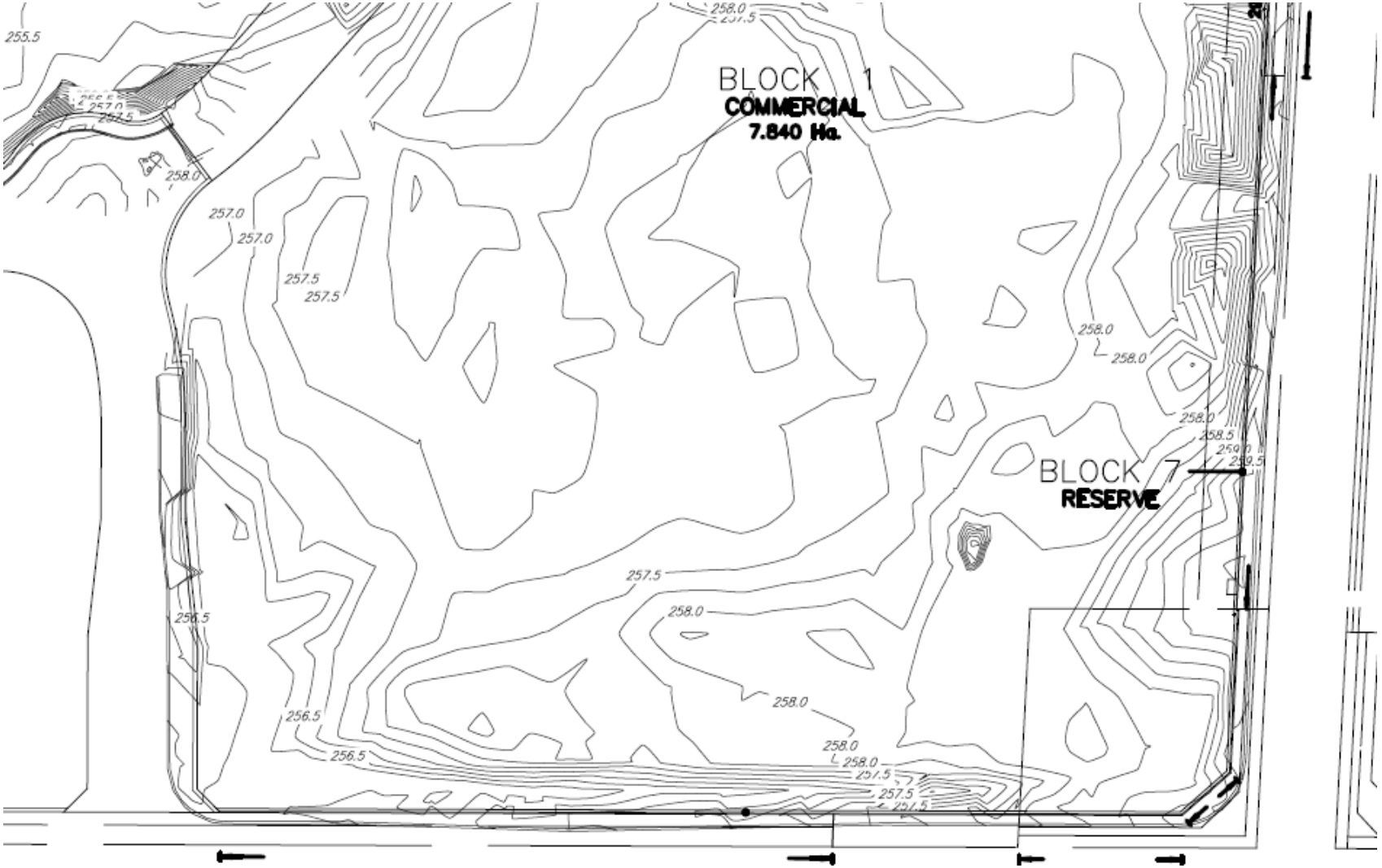

Figure 5 – Geotechnical boreholes location, Satellite Image

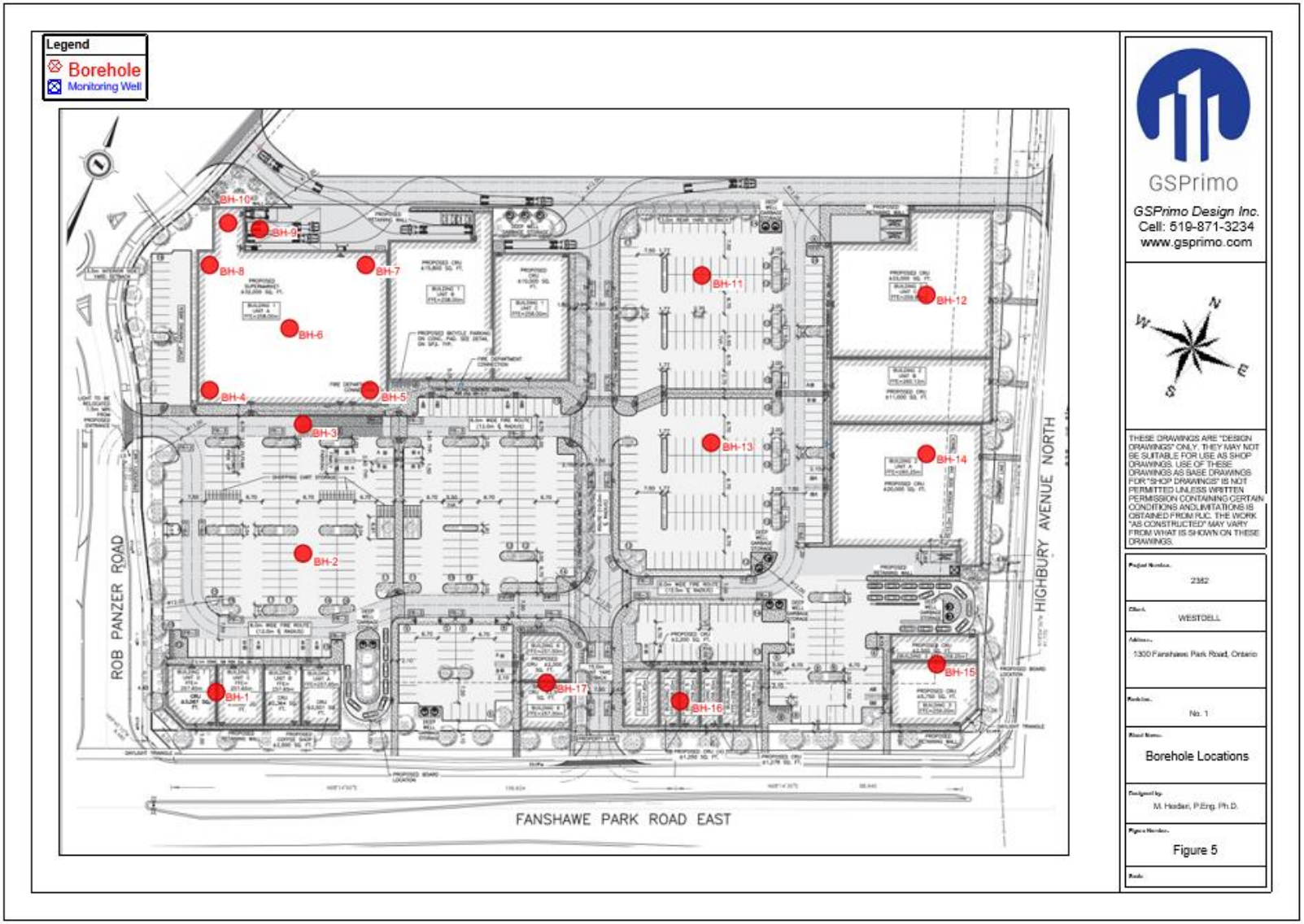

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Figure 6 – Geotechnical boreholes location, Site Plan

APPENDIX B – Borehole Logs and Explanation of Terms and Symbols

GSPrimo

Project Number: 2382	**Borehole:** BH-1
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.94 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	256.5		Ground		0				
0			Topsoil		1		1		1 12 10
1			Medium to Dark Brown No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		2 3 4		2		6 8 8
2					5 6 7		3		6 6 6
3					8 9		4		3 11 11
3			Medium Brown No Odor Moist to Wet Gravel & Sand, some Silt, trace Clay		10 11 12		5		10 8 5
4					13 14		6		8 12 12
5					15 16 17		7		9 12 14
6					18 19		8		7 13 21
6					20 21 22 23 24 25 26 27 28 29				
7 8 9									

SPT Blow Counts/300mm

10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur

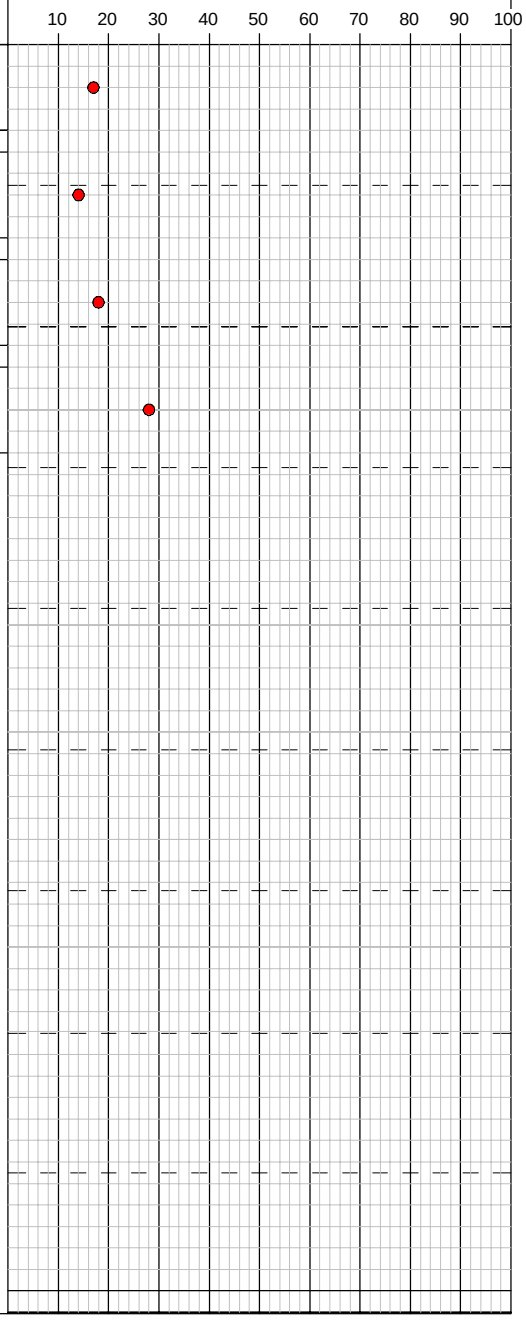
Hollow Stem (HS) Augur

Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-2
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.90 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	256.8		Ground		0					
0			Topsoil		0					
0 – 2			Medium Brown No Odor Moist to Wet Sandy Silt, trace Clay and Gravel		0 – 6		1		7 9 8	
					3 – 6		2		8 7 7	
					5 – 7		3		5 7 11	
2 – 3			Medium Brown No Odor Moist to Wet Gravel & Sand, some Silt, trace Clay		7 – 9		4		8 10 16	



Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-3
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.13 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	257.3		Ground		0					
0			Topsoil		1		1		7 10 7	
1			Medium Brown No Odor Moist Sandy Silt, some Clay, trace Gravel		2					
2					3		2		6 8 11	
3					4					
4					5					
5					6		3		15 25 22	
6					7					
7					8					
8					9					
9					10					
					11					
					12					
					13					
					14					
					15					
					16					
					17					
					18					
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					

10 20 30 40 50 60 70 80 90 100

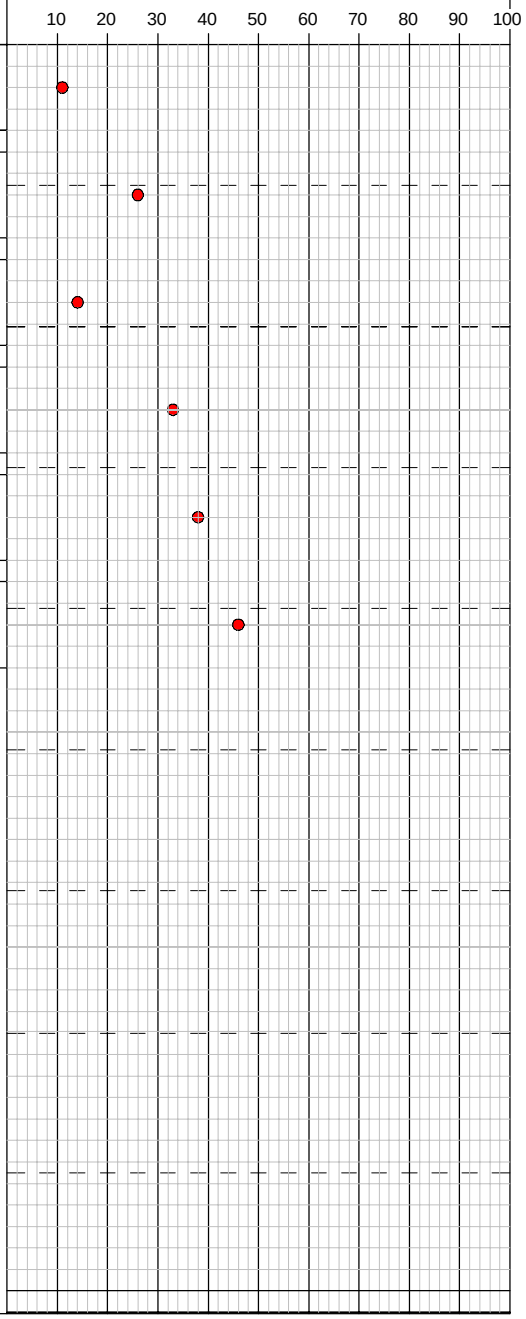
Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-4
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 4.42 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.1		Ground		0				
0			Topsoil		0				
0			Medium Brown, Wet Silty Sand, some Clay, trace Gravel		1		1		4 2 9
1					2				
1					3		2		14 16 10
2			Medium Brown No Odor Moist to Wet Silty Sand, some Clay trace Gravel		4				
2					5				
2					6		3		6 6 8
3					7				
3					8		4		8 17 16
3					9				
4					10				
4					11		5		15 19 19
4					12				
4					13		6		13 21 25
5					14				
5					15				
5					16				
6					17				
6					18				
6					19				
7					20				
7					21				
7					22				
8					23				
8					24				
8					25				
9					26				
					27				
					28				
					29				

SPT Blow Counts/300mm



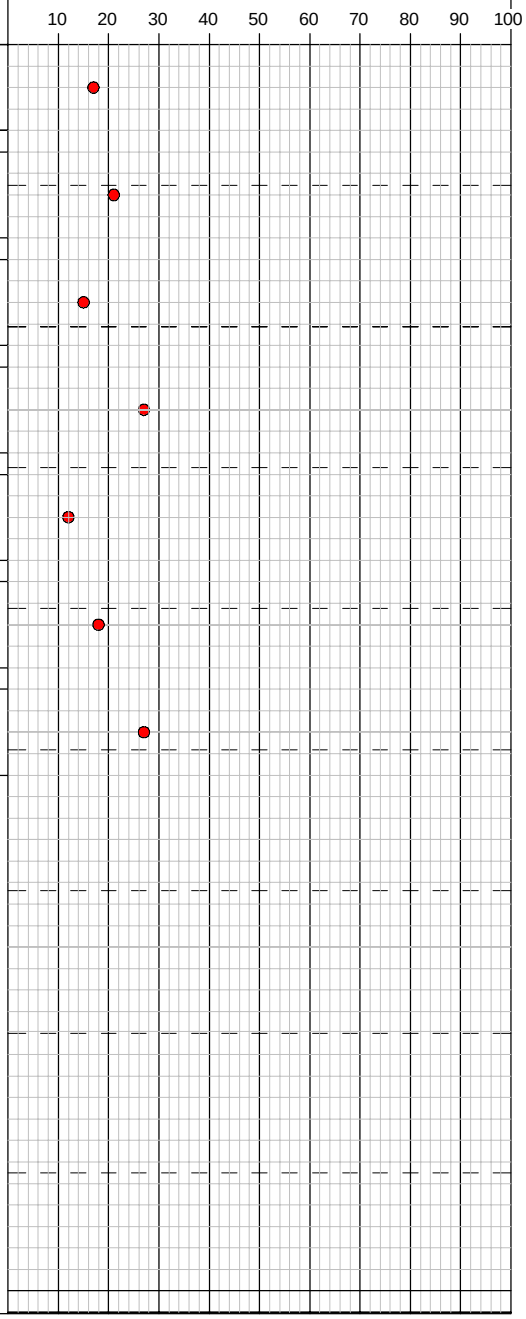
Solid Stem (SS) Augur | **Hollow Stem (HS) Augur** | **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-5
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.5		Ground		0				
0			Topsoil		0				
0 – 2			Medium Brown, No Odor Moist to Wet Silty Sand, some Clay, trace Gravel		0 – 6		1		6, 6, 11
					3 – 6		2		6, 10, 11
					6 – 7		3		6, 7, 8
2 – 5			Medium Brown No Odor Moist to Wet Silty Sand, some Clay trace Gravel		8 – 9		4		9, 15, 12
					10 – 11		5		5, 6, 6
					13 – 14		6		8, 9, 9
					15 – 16		7		9, 15, 12
5 – 9					17 – 29				

SPT Blow Counts/300mm



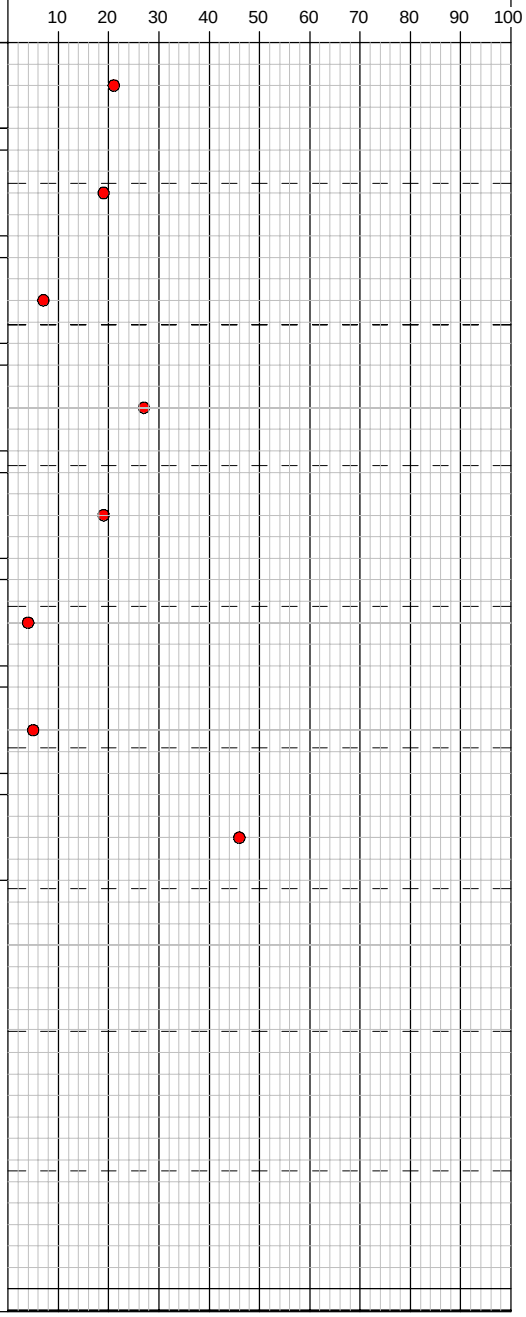
Solid Stem (SS) Augur | **Hollow Stem (HS) Augur** | **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-6
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.95 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.5		Ground		0				
0			Topsoil		1		1		1 11 10
1			Medium Brown, No Odor Moist to Wet Silty Sand, some Clay and Gravel		2 3 4		2		3 10 9
2					5 6 7		3		3 3 4
3					8 9		4		11 14 13
4			Light to Medium Brown No Odor Moist to Wet Sand, some Gravel and Silt, trace Clay		10 11 12		5		7 10 9
5					13 14		6		0 2 2
6					15 16 17		7		2 2 3
7					18 19		8		6 16 30
8					20 21 22 23 24 25 26 27 28 29				
9									

SPT Blow Counts/300mm



Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-7
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.5		Ground		0				
0			Topsoil		0		1		2 8 7
1			Medium Brown No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		2		2		16 20 16
2					5		3		10 13 14
3			Light to Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		8		4		3 6 6
4					10		5		3 2 3
5					13		6		8 11 15
6					15		7		5 10 18
7					18				
8					20				
9					23				
					25				
					28				

SPT Blow Counts/300mm

10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-8
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.1		Ground		0				
0			Topsoil		0		1		10 15 12
1			Dark Gray No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		2				
					3		2		5 8 6
2					5				
					6		3		13 12 11
					7				
3			Light to Medium Brown No Odor Moist Sand and Gravel, some Silt, trace Clay		8		4		4 4 8
					9				
					10				
4					11		5		11 15 17
					12				
					13				
					14		6		11 18 50
5					15				
					16		7		18 20 25
					17				
6					18				
					19				
					20				
					21				
7					22				
					23				
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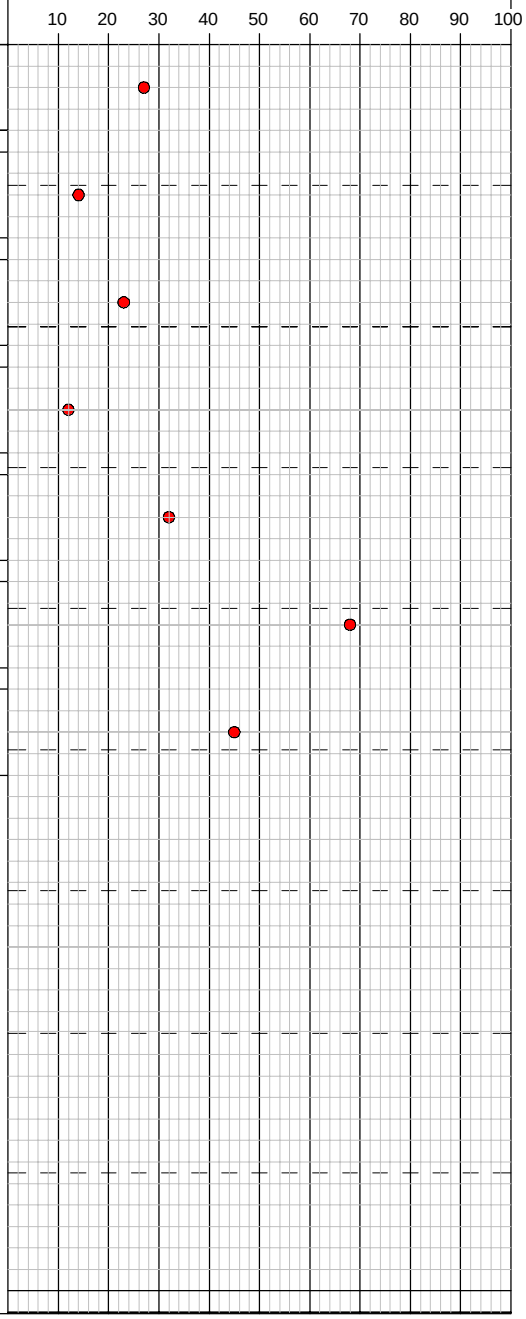
					25				
8					26				
					27				
					28				
9					29				

SPT Blow Counts/300mm



Solid Stem (SS) Augur

Hollow Stem (HS) Augur

Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-9
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.13 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	257.1		Ground		0					
0			Topsoil		0					
0			Light Brown, No Odor, Moist, Fill		1		1		18 8 7	
1			Medium to Dark Gray No Odor Moist Sandy Silt, some Clay, trace Gravel		3		2		4 7 8	
2					6		3		7 7 7	

10 20 30 40 50 60 70 80 90 100

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-10
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.13 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.0		Ground		0				
0			Topsoil		0				
1			Medium to Dark Gray No Odor Moist Sandy Silt, some Clay, trace Gravel		1		1		13 10 12
2					3		2		8 10 10
3					5		3		12 10 9
4					7				
5					8				
6					9				
7					10				
8					11				
9					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				
					23				
					24				
					25				
					26				
					27				
					28				
					29				

SPT Blow Counts/300mm

10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-11
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.13 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	257.5		Ground		0					
0			Topsoil		1		1		6 5 7	
1			Medium Gray No Odor Moist to Wet Sandy Silt, some Clay and Gravel		3		2		8 10 13	
2			Medium Brown to Gray No Odor Wet to Saturated Sand, some Gravel and Silt, trace Clay		6		3		12 14 13	

SPT Blow Counts/300mm: 10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur

Hollow Stem (HS) Augur

Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-12
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	258.3		Ground		0					
0			Topsoil		0					
0 – 1.8			Medium to Dark Brown No Odor Moist Silty Gravelly Sand, some Clay		0 – 6		1		5 6 5	
					3 – 4		2		2 2 7	
					6 – 7		3		8 11 10	
1.8 – 5.2			Light to Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		8 – 9		4		5 6 7	
					10 – 11		5		4 7 8	
					13 – 14		6		7 18 26	
					15 – 16		7		15 20 19	
5.2 – 9					17 – 29					

10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur

Hollow Stem (HS) Augur

Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-13
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 2.13 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	257.6		Ground		0					
0			Topsoil		0					
1			Medium Brown or Gray No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		1		1		5 11 15	
2					3		2		5 12 12	
3					5		3		6 7 9	
4					7					
5					9					
6					11					
7					13					
8					15					
9					17					
					19					
					21					
					23					
					25					
					27					
					29					

SPT Blow Counts/300mm: 10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur

Hollow Stem (HS) Augur

Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-14
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.94 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value	SPT Blow Counts/300mm
0	258.0		Ground		0					
0			Topsoil		1		1		0 3 4	
1			Medium Brown No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		3		2		3 3 6	
2					5		3		4 6 8	
2			Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		8		4		7 7 8	
3					10		5		6 7 6	
4					13		6		5 6 7	
5					15		7		6 9 10	
6					18		8		9 15 18	
6					20					
7					23					
8					26					
9					29					

SPT Blow Counts/300mm: 10 20 30 40 50 60 70 80 90 100

Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-15
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	258.5		Ground		0				
0			Topsoil		0		1		1 3 3
1					3		2		7 11 8
2			Light to Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		6		3		4 5 6
3					8		4		7 11 10
4					10		5		9 11 10
5					13		6		5 7 7
6					15		7		7 10 10
7					17				
8					18				
9					20				
					21				
					23				
					24				
					25				
					26				
					27				
					28				
					29				

SPT Blow Counts/300mm

10 20 30 40 50 60 70 80 90 100

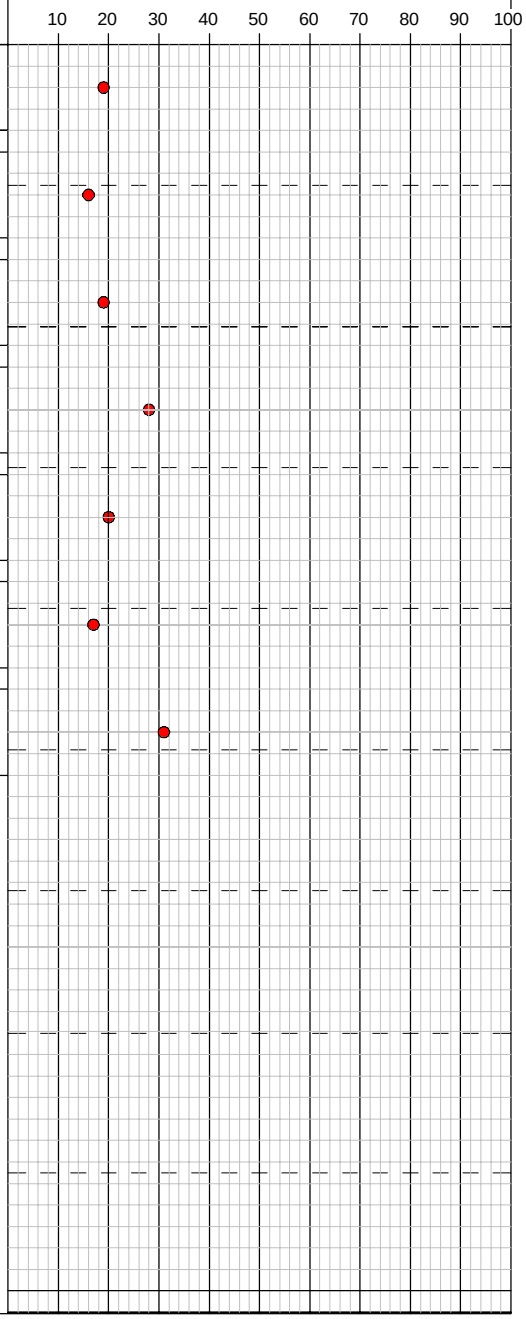
Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

GSPrimo

Project Number: 2382	**Borehole:** BH-16
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.18 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	258.1		Ground		0				
0			Topsoil		0				
0 – 1.8			Medium Brown or Gray No Odor Moist to Wet Sandy Silt, some Clay, trace Gravel		0 – 6		1		4 7 12
					3 – 8		2		6 8 8
					6 – 9		3		9 10 9
1.8 – 5.2			Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		8 – 12		4		7 8 20
					10 – 12		5		9 10 10
					13 – 15		6		5 8 9
					15 – 17		7		7 15 16
5.2 – 9					17 – 29				

SPT Blow Counts/300mm



Solid Stem (SS) Augur

Hollow Stem (HS) Augur

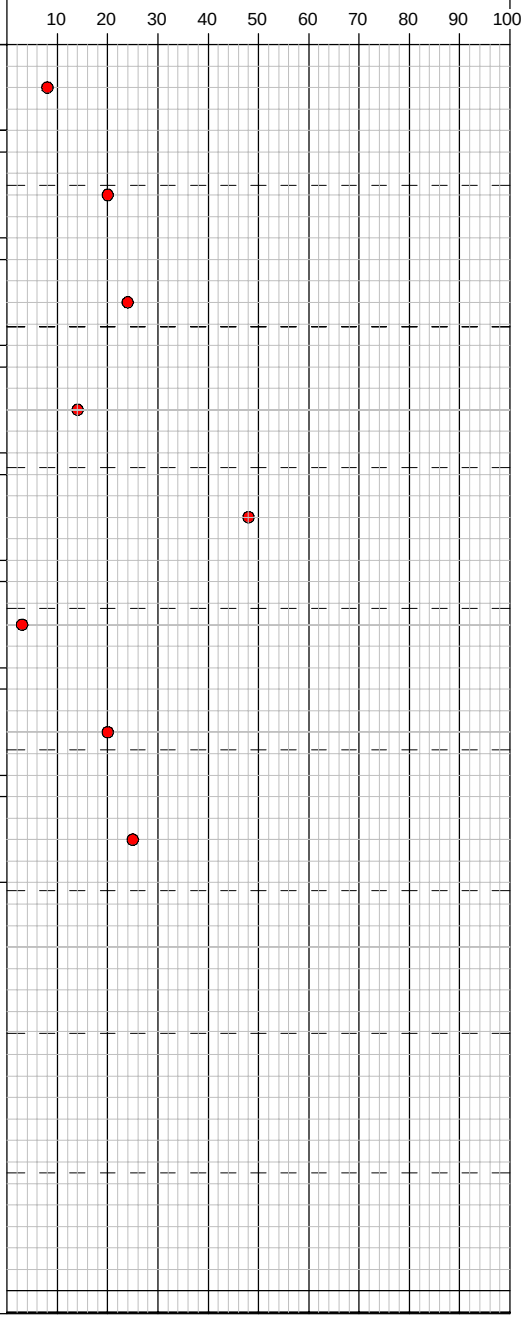
Water Level

GSPrimo

Project Number: 2382	**Borehole:** BH-17
Company: GSPrimo Design Inc.	**Drilling Date:** December 22 & 23, 2023
Project's Location: 1300 Fanshawe Park Road, London, Ontario	**Drilling Depth:** 5.94 m
	Drill Method: HS Augur
Project Manager: M. Heidari, P.Eng.	**Logged By:** M. Heidari, P.Eng.

Depth (m)	Elevation (masl)	Strata Plot	Strata Profile	Water Level	Depth (ft)	Sample Type	Sample Number	Sample Recovery	SPT N-Value
0	257.8		Ground		0				
0			Topsoil		0				
0 – 3			Medium Brown No Odor Dry to Wet Silty Sand, some Clay, trace Gravel		0 – 10				
3 – 6			Medium Brown No Odor Moist Sand, some Gravel and Silt, trace Clay		10 – 20				
0					0		1		1 4 4
0					3		2		11 12 8
0					5		3		9 12 12
0					8		4		7 6 8
0					10		5		18 28 20
0					13		6		1 1 2
0					15		7		9 10 10
0					18		8		8 11 14

SPT Blow Counts/300mm



Solid Stem (SS) Augur **Hollow Stem (HS) Augur** **Water Level**

Explanation of Terms and Symbols

The terms and symbols used on the borehole logs to summarize the results of field investigation and subsequent laboratory testing are described in these pages.

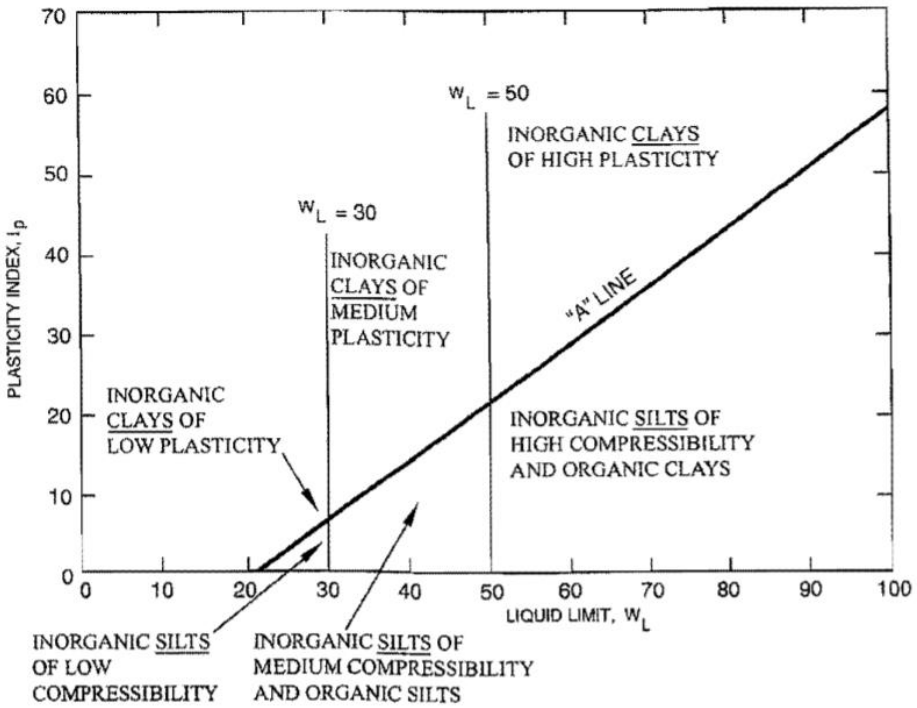
Abbreviations, graphic symbols, and relevant test method designations are as follows:

w	Water Content
w_L, LL	Liquid Limit
w_p, PL	Plastic Limit
I_p	Plasticity Index
γ	Soil unit weight
K	Coefficient of Lateral earth pressure
K_s	Module of vertical subgrade reaction
P	hydrostatic uplift pressure
γ_w	Unit weight of water
d	depth of structures' base below water level
p	Lateral earth pressure
q	Surcharge load
h	Depth from the ground surface
B	Width of rectangular footing
Φ	Geotechnical resistance factor
ϕ	Internal friction angle of soil
c	Cohesion
c_u, S_u	Undrained shear strength
V_s	Shear wave velocity
SPT-N	Penetration resistance
SPMMD	Standard Proctor Maximum Dry Density
MRD	Marshal Maximum Relative Density

Soils are classified and described according to their engineering properties and behaviours.

noun	gravel, sand, silt, clay	**> 35 % and main fraction**
"and"	and gravel, and silt, etc.	**>35 %**
adjective	gravelly, sandy, silty, clayey, etc.	**20 to 35 %**
"some"	some sand, some silt, etc.	**10 to 20%**
"trace"	trace sand, trace silt, etc.	**1 to 10 %**

The plasticity chart (after Casagrande, 1948):



Correlation of soil parameters with uncorrected SPT values for: a) cohesionless soils and b) cohesive soil

Compactness Condition	SPT N-INDEX (blows per 0.3 m)
Very Loose	0 to 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	>50

(a)

Consistency	Undrained Shear Strength (kPa)	SPT N-INDEX (blows per 0.3 m)
Very soft	< 12	0 to 2
Soft	12 - 25	2 to 4
Firm	25-50	4 to 8
Stiff	50 - 100	8 to 15
Very stiff	100 - 200	15 to 30
Hard	>200	>30

(b)

- *Standard Penetration Tests (SPT); followed the methods described in ASTM Standard D1586-08a. The number of blows by a 63.5 kg (140 lb) hammer dropped from 760 mm (30 in.) is recorded for a depth of 460 mm (18"). The last two 150 mm distances (total = 300 mm) are used to calculate the SPT-N index.*

APPENDIX C – Laboratory Test Results

GEOTRUST ENGINEERING LIMITED

GEOTRUST Engineering Limited
71 Chepstow, London, ON, N6G 3S5
Tel: +1 647-870-6903
www.geotrustengineering.ca
aly.ahmed@geotrustengineering.ca

GEOTECHNICAL TESTING REPORT DATA

Project No.: 2382

Prepared for:

A & A Environmental Consultants Inc.

By:

GeoTrust Engineering Limited

Project No. GT23002TA

Jan 11, 2024

GEOTRUST ENGINEERING LIMITED

GEOTRUST Engineering Limited
71 Chepstow, London, ON, N6G 3S5
Tel: +1 647-870-6903
www.geotrustengineering.ca
aly.ahmed@geotrustengineering.ca

Jan 11, 2024

GSPrimo Design Inc.
1804 Downes Court,
London, ON
N6G 5E8
Email: mheidari@gsprimo.com

Attention : **Dr. Mehdi Heidari, Ph D., P Eng.**

RE: **LABORATORY TEST RESULTS - Project: 2382 – Located at 1300 Fanshawe Park Rd. W., London, ON**

Dear Dr. Heidari,

GeoTrust Engineering Limited (GeoTrust) is pleased to provide the Final Laboratory Testing Report Data for the project mentioned above. This report presents the results of laboratory testing conducted on soil samples received at GeoTrust Laboratory on January 5, 2024. The laboratory testing included the following.

1. Water Moisture Content - ASTM D2216
2. Particle Size Analysis (Hydrometer) - ASTM D422 - D2217

The results of the testing are summarized in the attached **Table 1**. Grain size distribution curves are presented in **Appendix A**.

We trust that this information meets your present requirements. If we can be of additional assistance in this regard, please contact this office.

For and on behalf of GeoTrust Engineering Limited,

Aly Ahmed

Aly Ahmed, Ph D, P.Eng.,
General Manager

GEOTRUST ENGINEERING LIMITED

GEOTRUST Engineering Limited
71 Chepstow, London, ON, N6G 3S5
Tel: +1 647-870-6903
www.geotrustengineering.ca
aly.ahmed@geotrustengineering.ca

Table 1: Summary of Moisture Content and Grain Size Distribution Results

BH No.	Depth (ft)	Moisture Content, (%)	Soil Compositions (%)				Soil Description
			Gravel	Sand	Silt	Clay	
BH7	12.5 – 14.5	3.5	18	64	12	6	Sand, some Gravel and Silt, trace Clay
BH8	15 – 17	2.7	40	46	11	3	Sand and Gravel, some Silt, trace Clay
BH12	2.5 – 4.5	11.2	26	35	28	11	Silty Gravelly Sand, some Clay
BH17	7.5 – 9.5	9.5	10	48	30	12	Silty Sand, trace Gravel, some Clay
BH2	2.5 – 4.5	9.3	5	29	57	9	Sandy Silt, trace Clay and Gravel
BH3	5 - 7	12.5	9	21	55	15	Sandy Silt, some Clay, trace Gravel
BH15	10 -12	5.5	18	64	12	6	Sand, some Gravel and Silt, trace Clay
BH1	10 -12	6.1	41	35	17	7	Gravel and Sand, some Silt, trace Clay

CLOSURE

We trust that this information is satisfactory for your present requirements. Should you have any questions or require additional information, please do not hesitate to contact this office.

For and Behalf of GeoTrust Engineering Limited,

Aly Ahmed

Aly Ahmed, Ph D., P.Eng.
General Manager

GEOTRUST ENGINEERING LIMITED

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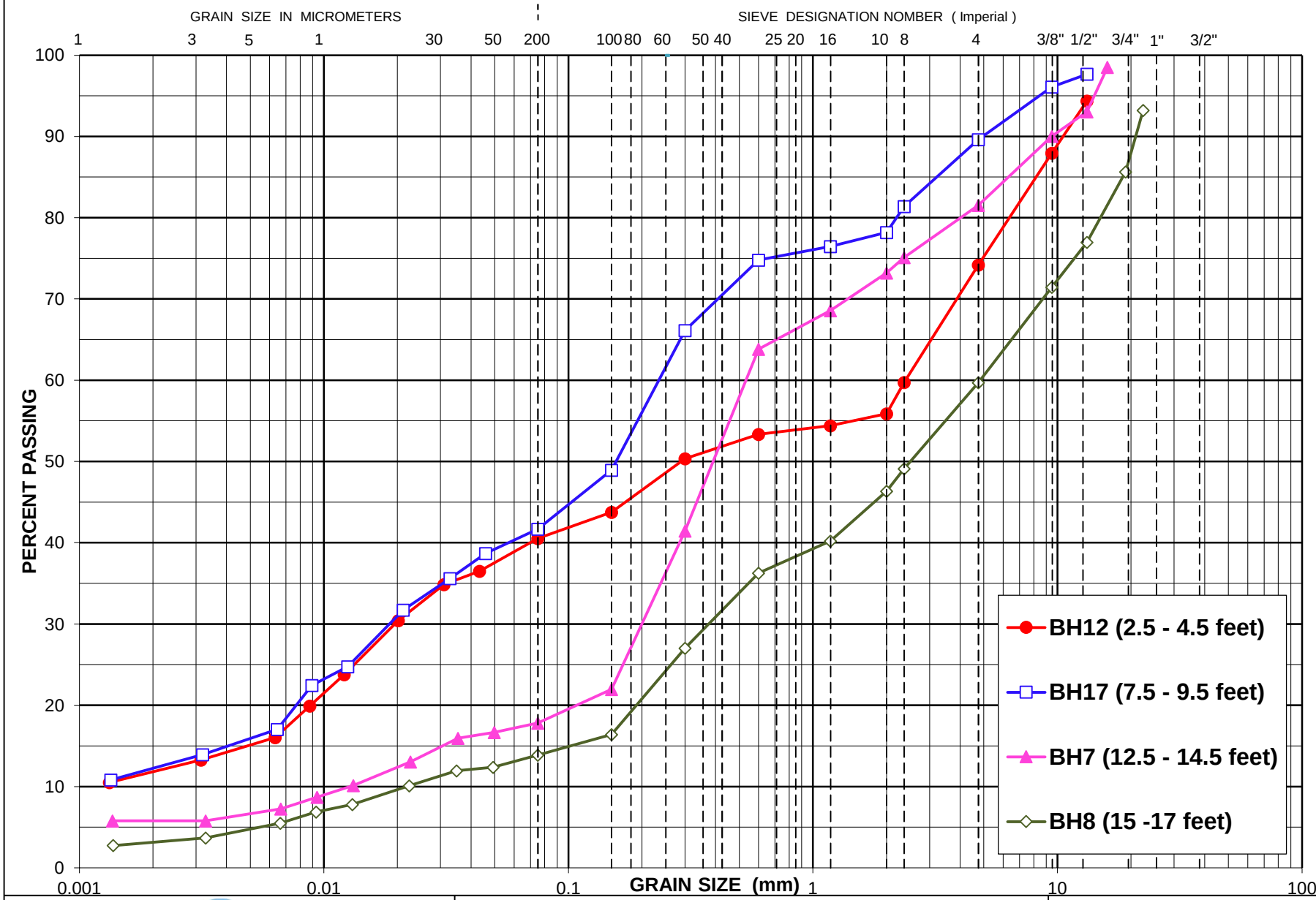
71 Chepstow, London, ON, N6G 3S5
Tel: +1 647-870-6903
www.geotrustengineering.ca
aly.ahmed@geotrustengineering.ca

APPENDIX A

LS 702/D 422

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



GEOTRUST ENGINEERING LIMITED

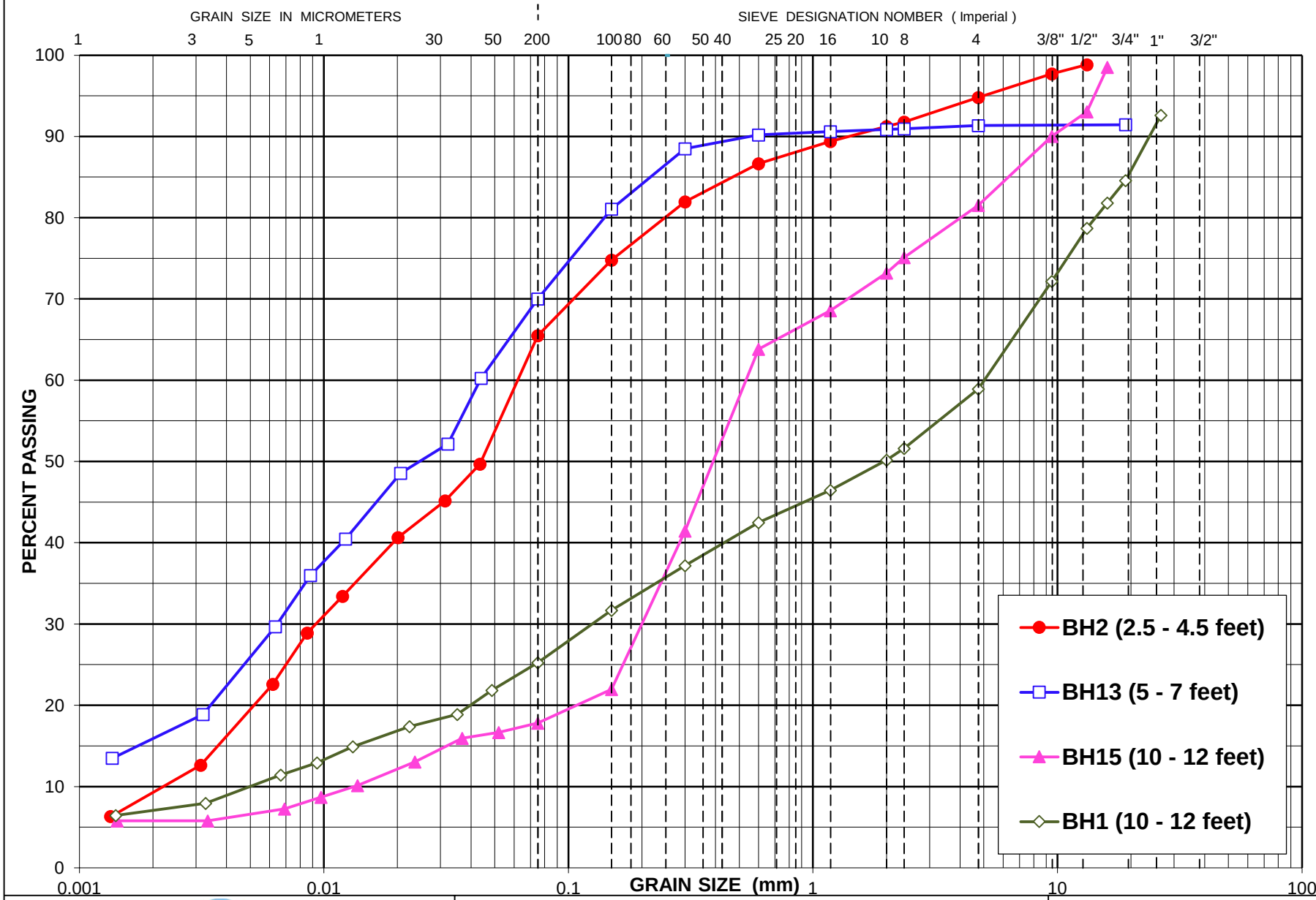
GRAIN SIZE DISTRIBUTION

Figure No.:	1
PROJECT No. :	GT23002TA
DATE :	Jan 11, 2024

LS 702/D 422

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

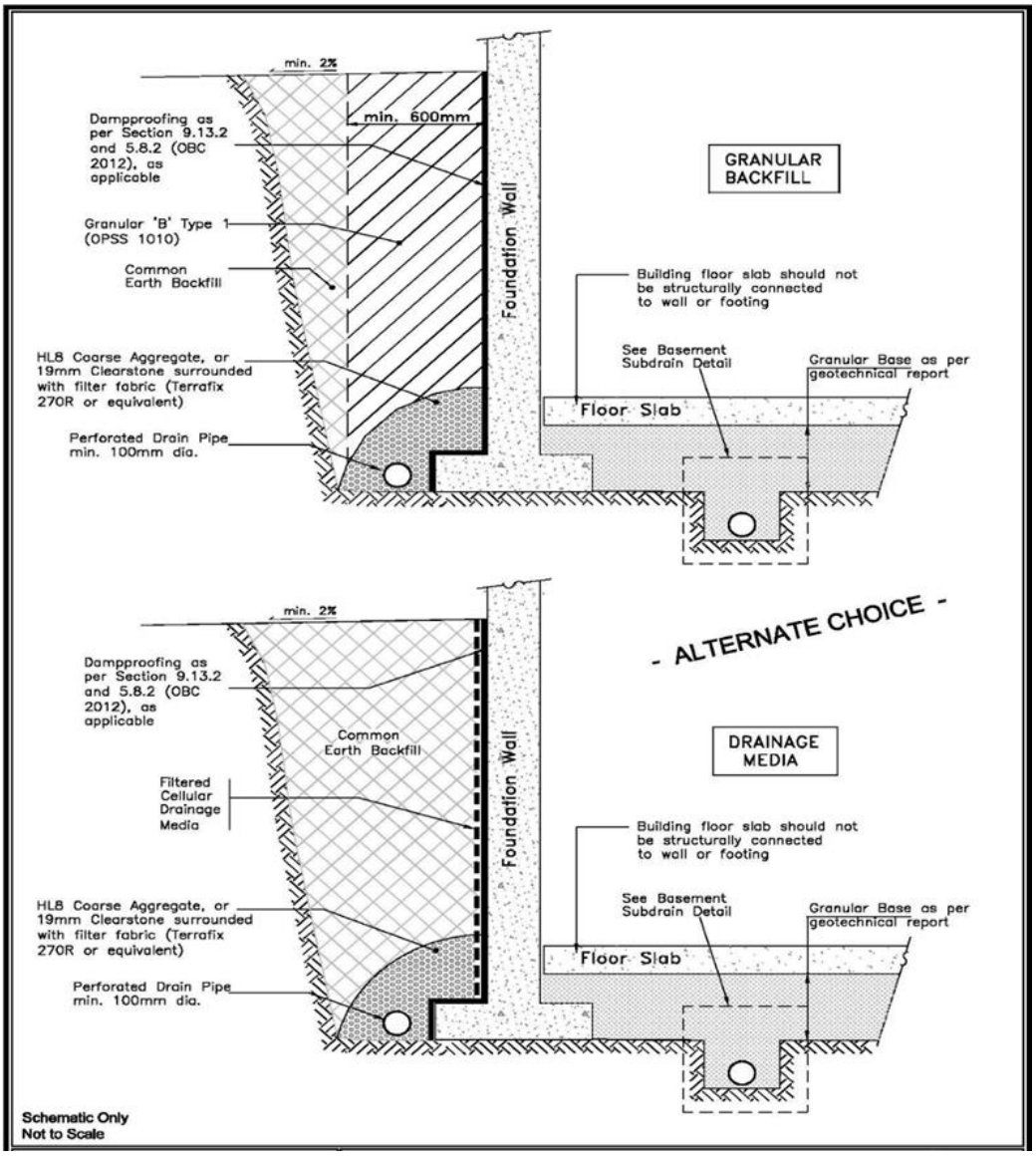


GEOTRUST ENGINEERING LIMITED

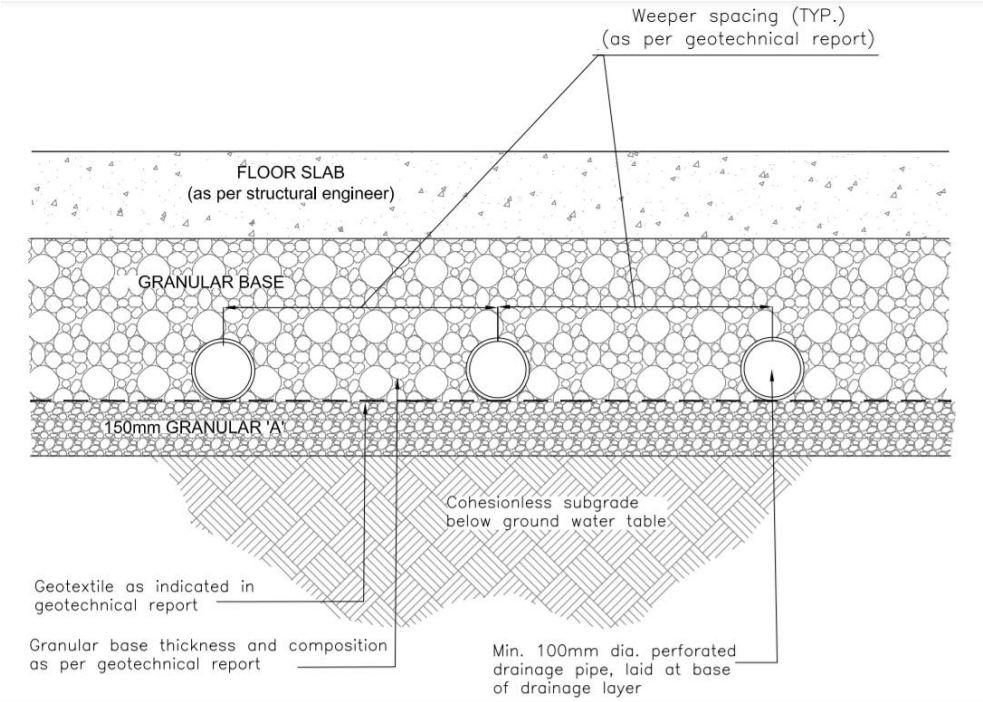
GRAIN SIZE DISTRIBUTION

Figure No.: 2	1
PROJECT No. :	GT23002TA
DATE :	Jan 11, 2024

APPENDIX D – Drainage Details



Basement Drainage Details



Subfloor Drainage Details