



re: **Geotechnical Design Summary Details**
Proposed Residential Development
5331 Fernbank Road – Ottawa, Ontario

to: Claridge Homes – **Marc St. Pierre** – marc.stpierre@claridgehomes.com

date: April 2, 2026

file: PG5683-MEMO.02 Revision 5

Further to your request, Paterson Group (Paterson) prepared the current memorandum to provide a grading, servicing and landscape review for the proposed residential development. The following memorandum should be read in conjunction with the Geotechnical Investigation Report (Paterson Report PG5683-1 Revision 1, dated November 13, 2025).

1.0 Grading Review

Paterson reviewed the following drawings prepared by Novatech for the aforementioned development:

- Grading Plan – Project No. 121011-00 - Drawing No. 121011-GR1 - Revision 8 dated March 18, 2026.
- Grading Plan – Project No. 121011-00 - Drawing No. 121011-GR2 - Revision 8 dated March 18, 2026.

1.1 Residential Grading

Based on the grading plans provided, the proposed grading for all residential lots/blocks within the subject site is in compliance with our permissible grade raise recommendations.

The proposed grades for the basement unit staircase slabs are not provided on the grading plan. However, it is anticipated that the slabs may not be provided with the required 1.5 m of soil cover for frost protection. For services with less than 1.5 m soil cover, a combination of soil cover and rigid insulation should be used, as detailed in Table 1 below.

Table 1 – Rigid Insulation Recommendations for Buildings with Reduced Soil Cover

Thermal Condition	Soil Cover Provided (mm)	Insulation Dimensions	
		Thickness (mm)	Extension (mm)
Heated	1200-1499	25	Extend 600 mm horizontally beyond edge of the footing
	900-1199	50	Extend 900 mm horizontally beyond edge of the footing
	600-899	75	Extend 1200 mm horizontally beyond edge of the footing





Table 1, attached to the current memorandum, provides a grading summary for the subject site.

1.2 Right-of-Way Grading

Based on the grading plans provided, the proposed grading for the entirety of the rights-of-way (ROWs) and parking areas within the subject site are considered acceptable and in compliance with our permissible grade raise recommendations

2.0 Servicing Review

Paterson reviewed the following drawings prepared by Novatech for the aforementioned development:

- General Plan of Services – Project No. 121011-00 - Drawing No. 121011-GP1 – Revision 7 dated March 18, 2026.
- General Plan of Services – Project No. 121011-00 - Drawing No. 121011-GP2 – Revision 7 dated March 18, 2026.

2.1 Lateral Support

Based on the above-noted site servicing plan, the site servicing layout does not impede the lateral support zones of any adjacent buildings/structures and is in conformance with our recommendations.

2.2 Frost Protection

From our review of the above-noted site servicing plan, a number of servicing pipe sections are not provided with sufficient soil cover of 2.1 m for adequate frost protection (measured from the proposed ground surface to the pipe obvert). Reference should be made to the marked-up servicing plans which show the areas with insufficient soil cover, attached to the current report.

For services with less than 2.1 m soil cover, a combination of soil cover and rigid insulation should be used, as detailed in Table 2 on the following page.





Thermal Condition	Soil Cover Provided (mm)	Insulation Dimensions	
		Thickness (mm)	Extension (mm)
Unheated	1800-2000	25	Extend 600 mm horizontally beyond edge of the pipe
	1500-1800	50	Extend 900 mm horizontally beyond edge of the pipe
	1200-1500	75	Extend 1200 mm horizontally beyond edge of the pipe

Alternatively, instead of extending the rigid insulation 600 to 1200 mm beyond the edge of the pipe, the rigid insulation can be “boxed” around the pipe by transitioning from horizontal to vertical placement of the rigid insulation and extending to the invert pipe elevation, effectively forming a box of rigid insulation around the pipe. In this case, the rigid insulation should still be extended far enough to provide adequate spring-line and cover backfill material around the pipe.

It should be noted that the elevations of the watermain profiles are not available at the current time. Based on the pipe crossing obvert elevations, it is anticipated that all watermains will be provided with sufficient soil cover for frost protection (without insulation). Paterson should review the watermain elevations for verification, once available.

3.0 Landscaping Considerations

3.1 Tree Planting Restrictions

Paterson completed a soils review of the site to determine applicable tree planting setbacks, in accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines) for trees planted within a public right-of-way (ROW). Atterberg limits testing was completed for recovered silty clay samples at selected locations throughout the subject site

Grain size distribution and hydrometer testing was also completed on selected soil samples. The above-noted test results were completed on samples taken at depths between the anticipated underside of footing elevation and a 3.5 m depth below finished grade. The results of our testing are presented in Paterson Report PG5683-1, dated March 5, 2021.

Based on the results of the Atterberg limit testing mentioned above, the plasticity index was found to be less than 40% in all the tested clay samples. In addition, based on the clay content found in the clay samples from the grain size distribution test results, moisture levels and consistency, the silty clay across the subject site is considered low to medium sensitivity clay and should not be designated as sensitive marine clays.



Low to Medium Sensitivity Clays

A low to medium sensitivity clay soil was encountered between the anticipated design underside of footing elevations and 3.5 m below finished grade as per City Guidelines for the entire site. Based on our Atterberg limits test results, the modified plasticity index does not exceed 40% across the site. The following tree planting setback is recommended for the entire subject site due to the presence of low to medium sensitivity clays. Large trees (mature height over 14 m) can be planted within these areas provided a tree to foundation setback equal to the full mature height of the tree can be provided (e.g. in a park or other green space). Tree planting setback limits may be reduced to **4.5 m** for small (mature height up to 7.5 m) and medium size trees (mature tree height 7.5 to 14 m), provided that the conditions noted below are met.

- ❑ The underside of footing (USF) is 2.1 m or greater below the lowest finished grade must be satisfied for footings within 10 m from the tree, as measured from the centre of the tree trunk and verified by means of the Grading Plan as indicated procedural changes below.
- ❑ A small tree must be provided with a minimum of 25 m³ of available soil volume while a medium tree must be provided with a minimum of 30 m³ of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally uncompacted when backfilling in street tree planting locations.
- ❑ The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect
- ❑ The foundation walls are to be reinforced at least nominally (minimum of two upper and two lower 15M bars in the foundation wall).
- ❑ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree).

It is well documented in the literature, and it is our experience, that fast-growing trees located near buildings founded on cohesive soils that shrink on drying can result in long-term differential settlements of the structures. Tree varieties that have the most pronounced effect on foundations are seen to consist of poplars, willows and some maples (i.e., Manitoba Maples) and, as such, they should not be considered in the landscaping design.

3.2 Aboveground Swimming Pools, Hot Tubs, Decks and Additions

The in-situ soils are considered to be acceptable for in-ground swimming pools. Above ground swimming pools must be placed at least 5 m away from the residence foundation and neighboring foundations. Otherwise, pool construction is considered routine and can be constructed in accordance with the manufacturer's requirements.

Additional grading around the hot tub should not exceed permissible grade raises. Otherwise, hot tub construction is considered routine and can be constructed in accordance with the manufacturer's specifications.



Additional grading around proposed deck or addition should not exceed permissible grade raises. Otherwise, standard construction practices are considered acceptable.

3.3 Landscaping Review

Paterson reviewed the following drawings prepared by James B. Lennox & Associates (JBLA) for the aforementioned development:

- ❑ Landscape Plan (North-West) – Project No. 21-CLG-2163 - Drawing No. L.1 – Revision 2 dated April 2, 2026.
- ❑ Landscape Plan (South-East) – Project No. 21-CLG-2163 - Drawing No. L.2 – Revision 2 dated April 2, 2026.

Based on the above-noted drawings, a minimum setback of 4.5 m from the nearest building foundation is provided for all proposed trees at the subject site.

A number of buildings, which require a reduced tree planting setback of 4.5 m, are not provided with the required minimum 2.1 m of soil cover. These units will require an engineered fill granular pad below the underside of footing to effectively extend the footing deeper and achieve the required minimum of 2.1 m of soil cover. The engineered fill pad thickness, where required, is presented in Table 1, attached to the current memorandum. It should be noted that where 2.1 m of soil cover is not provided, but a reduced tree planting setback is not required, a granular pad below the footings will not be required.

It is understood that where a reduced tree planting setback of 4.5 m is required, small and medium trees will be provided with 25 m³ and 30 m³ of available soil volume, the foundation walls of the adjacent buildings will be reinforced with a minimum of two upper and two lower 15M bars, and that grading surrounding the tree will promote drainage to the tree root zone.

Accordingly, the proposed landscaping design is acceptable from a geotechnical perspective and is in conformance with Paterson's recommendations provided in the aforementioned geotechnical investigation report.



We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Owen R. Canton, B.Eng.



Scott S. Dennis, P.Eng.

Attachments:

- Table 1 – Summary of Lot Grading
- Drawing PG5683-3 – Unit Numbering Plan
- Marked Up Servicing Plans



PG5683 - Table 1 - Summary of Design Details
Claridge Homes - 5331 Fernbank Road

Building Number	Unit Number	Original GS Front	Proposed GS Front	Original GS Side	Proposed GS Side	Original GS Rear	Proposed GS Rear	Underside of Footing Elevation	Bearing Resistance Value at SLS	Seismic Site Class	Engineered Fill Required for Tree Planting - Front	Engineered Fill Thickness Side (Original GS)	Engineered Fill Thickness Rear (Original GS)	Permissible Grade Raise	Above Permissible Grade Raise Front	Above Permissible Grade Raise Side	Above Permissible Grade Raise Rear	Minimum Thickness LWF in Front Porches (if Applicable)	Minimum Thickness LWF and Extents
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(kPa)		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
BLDG A	1	96.30	97.50	96.30	97.35	96.45	97.50	95.39	120	E	n/a	0.15	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.21	97.50	N/A	N/A	96.40	97.50	95.39	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.21	97.50	N/A	N/A	96.50	97.50	95.39	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.80	97.60	97.50	97.50	96.90	97.50	95.39	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
BLDG B	1	97.17	97.45	97.25	97.45	97.18	97.45	95.41	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.36	97.45	N/A	N/A	96.45	97.45	95.41	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.70	97.45	N/A	N/A	96.50	97.45	95.41	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.60	97.45	96.55	97.38	96.55	97.45	95.41	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG C	1	96.45	97.45	96.45	97.40	96.45	97.45	95.46	120	E	0.15	0.16	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.42	97.45	N/A	N/A	96.36	97.45	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.42	97.45	N/A	N/A	96.36	97.45	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	97.03	97.45	97.25	97.45	97.03	97.45	95.46	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG D	1	97.15	97.62	97.28	97.55	97.10	97.62	95.55	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.55	97.62	N/A	N/A	96.43	97.62	95.55	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.50	97.62	N/A	N/A	96.45	97.62	95.55	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.45	97.62	96.45	97.55	96.45	97.62	95.55	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG E	1	96.55	97.62	96.55	97.62	96.60	97.62	95.62	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.39	97.62	N/A	N/A	96.39	97.62	95.62	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.39	97.62	N/A	N/A	96.39	97.62	95.62	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	97.05	97.62	97.14	97.57	97.11	97.62	95.62	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG F	1	97.10	97.81	97.50	97.81	97.10	97.81	95.74	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.47	97.81	N/A	N/A	96.46	97.81	95.74	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.50	97.81	N/A	N/A	96.70	97.81	95.74	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.60	97.81	96.60	97.75	96.65	97.81	95.74	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG G	1	96.66	97.91	96.66	97.81	96.66	97.81	95.85	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.67	97.91	N/A	N/A	96.68	97.81	95.85	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.80	97.91	N/A	N/A	96.98	97.81	95.85	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	97.05	97.91	97.36	97.81	97.11	97.81	95.85	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG H	1	97.00	98.00	97.15	98.00	96.95	98.00	95.92	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.60	98.00	N/A	N/A	96.80	98.00	95.92	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.60	98.00	N/A	N/A	96.70	98.00	95.92	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.60	98.00	96.60	97.90	96.60	98.00	95.92	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG J	1	96.60	98.00	96.60	97.95	96.60	98.00	95.98	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.65	98.00	N/A	N/A	96.65	98.00	95.98	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.90	98.00	N/A	N/A	96.80	98.00	95.98	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	97.05	98.00	97.20	97.98	96.90	98.00	95.98	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG K	1	96.90	98.01	96.90	98.01	97.15	98.01	95.75	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.85	98.01	N/A	N/A	97.15	98.01	95.75	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.52	98.01	N/A	N/A	97.20	98.01	95.75	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.90	98.01	96.95	97.86	97.40	98.01	95.75	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
BLDG L	1	96.60	98.04	96.50	97.90	96.50	98.04	95.79	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.60	98.04	N/A	N/A	96.55	98.04	95.79	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.60	98.04	N/A	N/A	96.55	98.04	95.79	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.60	98.04	96.60	98.04	96.55	98.04	95.79	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
BLDG M	1	96.60	97.60	96.60	97.50	96.65	97.70	95.62	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.65	97.60	N/A	N/A	96.68	97.75	95.62	120	E	0.15	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.65	97.60	N/A	N/A	96.68	97.75	95.62	120	E	0.15	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.65	97.60	96.65	97.60	96.65	97.75	95.62	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG N	1	96.60	97.55	96.60	97.50	96.60	97.50	95.49	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.55	97.55	N/A	N/A	96.55	97.45	95.49	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.55	97.55	N/A	N/A	96.55	97.50	95.49	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.50	97.45	96.45	97.35	96.45	97.50	95.49	120	E	0.15	0.24	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG P	1	96.50	97.52	96.45	97.40	96.45	97.45	95.46	120	E	0.15	0.16	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.53	97.52	N/A	N/A	96.45	97.45	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.53	97.52	N/A	N/A	96.50	97.45	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.53	97.52	96.53	97.50	96.55	97.50	95.46	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG Q	1	96.52	97.52	96.52	97.52	96.55	97.52	95.46	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.50	97.52	N/A	N/A	96.52	97.52	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.45	97.52	N/A	N/A	96.50	97.52	95.46	120	E	0.15	n/a	0.15	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.40	97.52	96.40	97.42	96.40	97.52	95.46	120	E	0.15	0.15	0.15	1.50	n/a	n/a	n/a	n/a	n/a
BLDG R	1	96.55	97.82	96.55	97.78	96.70	97.88	95.72	120	E	n/a	0.15	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	2	96.58	97.82	N/A	N/A	96.70	97.88	95.72	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	3	96.58	97.82	N/A	N/A	96.70	97.88	95.72	120	E	n/a	n/a	n/a	1.50	n/a	n/a	n/a	n/a	n/a
	4	96.60	97.82	96.60	97.60	96.70	97.88	95.72	120	E	n/a	0.22	n/a	1.50	n/a	n/a	n/a	n/a	n/a

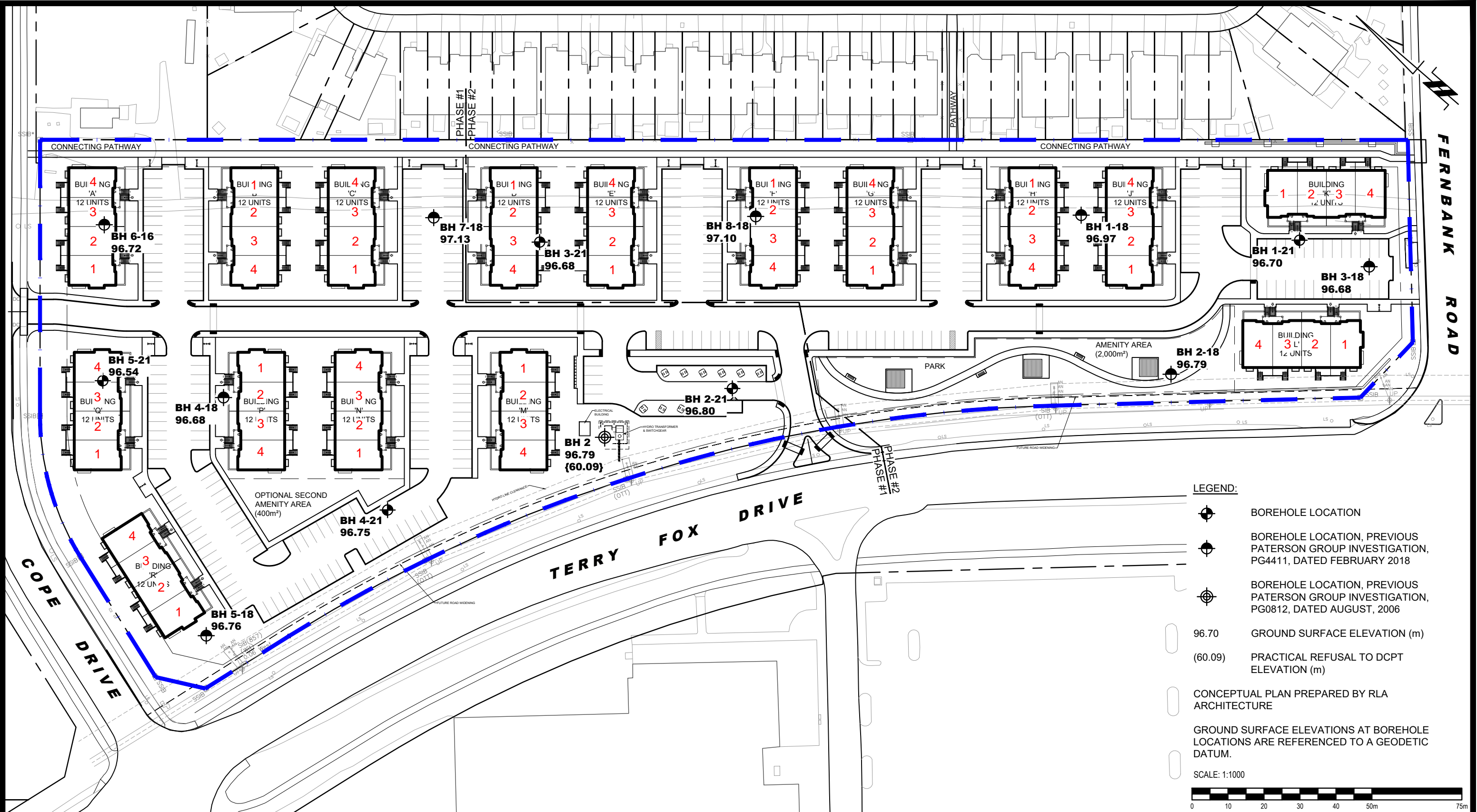
The following grading plans were reviewed as part of our submission:

- Grading Plan - Project No. 121011-00 -Drawing No. 121011-GR1 - Revision 7 dated March 18, 2026.

- Grading Plan - Project No. 121011-00 -Drawing No. 121011-GR2 - Revision 7 dated March 18, 2026.

Note:

- Units are numbered left to right from a parking lot view perspective. Reference should be made to Drawing PG5683-3 for the unit numbering plan, attached to the current memorandum



LEGEND:

- BOREHOLE LOCATION
- BOREHOLE LOCATION, PREVIOUS PATERSON GROUP INVESTIGATION, PG4411, DATED FEBRUARY 2018
- BOREHOLE LOCATION, PREVIOUS PATERSON GROUP INVESTIGATION, PG0812, DATED AUGUST, 2006
- 96.70 GROUND SURFACE ELEVATION (m)
- (60.09) PRACTICAL REFUSAL TO DCPT ELEVATION (m)
- CONCEPTUAL PLAN PREPARED BY RLA ARCHITECTURE
- GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.
- SCALE: 1:1000

9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DD/MM/YYYY	INITIAL
1	REVISED WITH UPDATED CONCEPTUAL PLAN	22/10/2025	OC

**CLARIDGE HOMES
GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL DEVELOPMENT
5331 FERNBANK ROAD**

UNIT NUMBERING PLAN

OTTAWA, ONTARIO

Scale:	1:1000	Date:	02/2021
Drawn by:	NFRV	Report No.:	PG5683-1
Checked by:	VD	Dwg. No.:	PG5683-3
Approved by:	DJG	Revision No.:	1

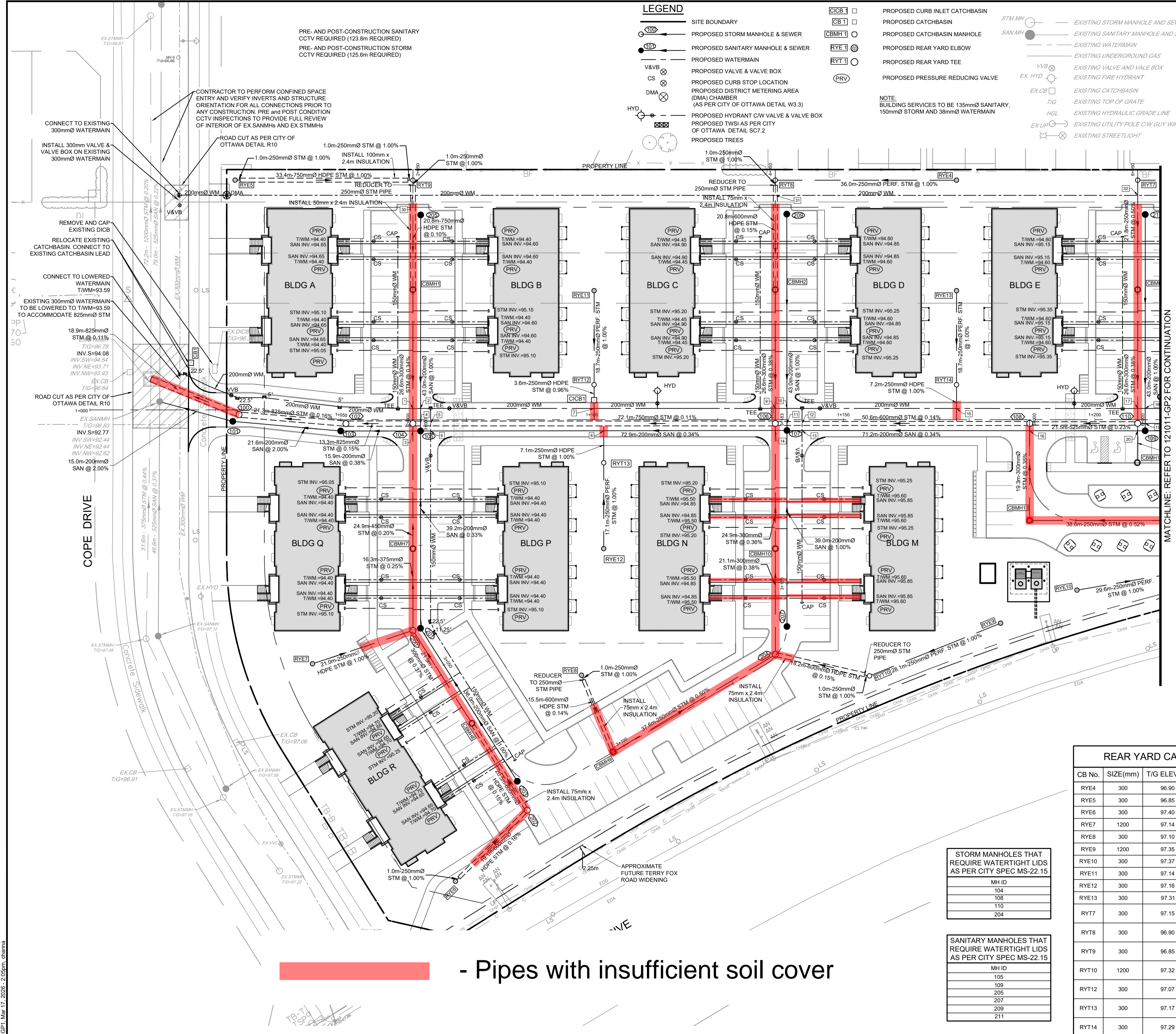
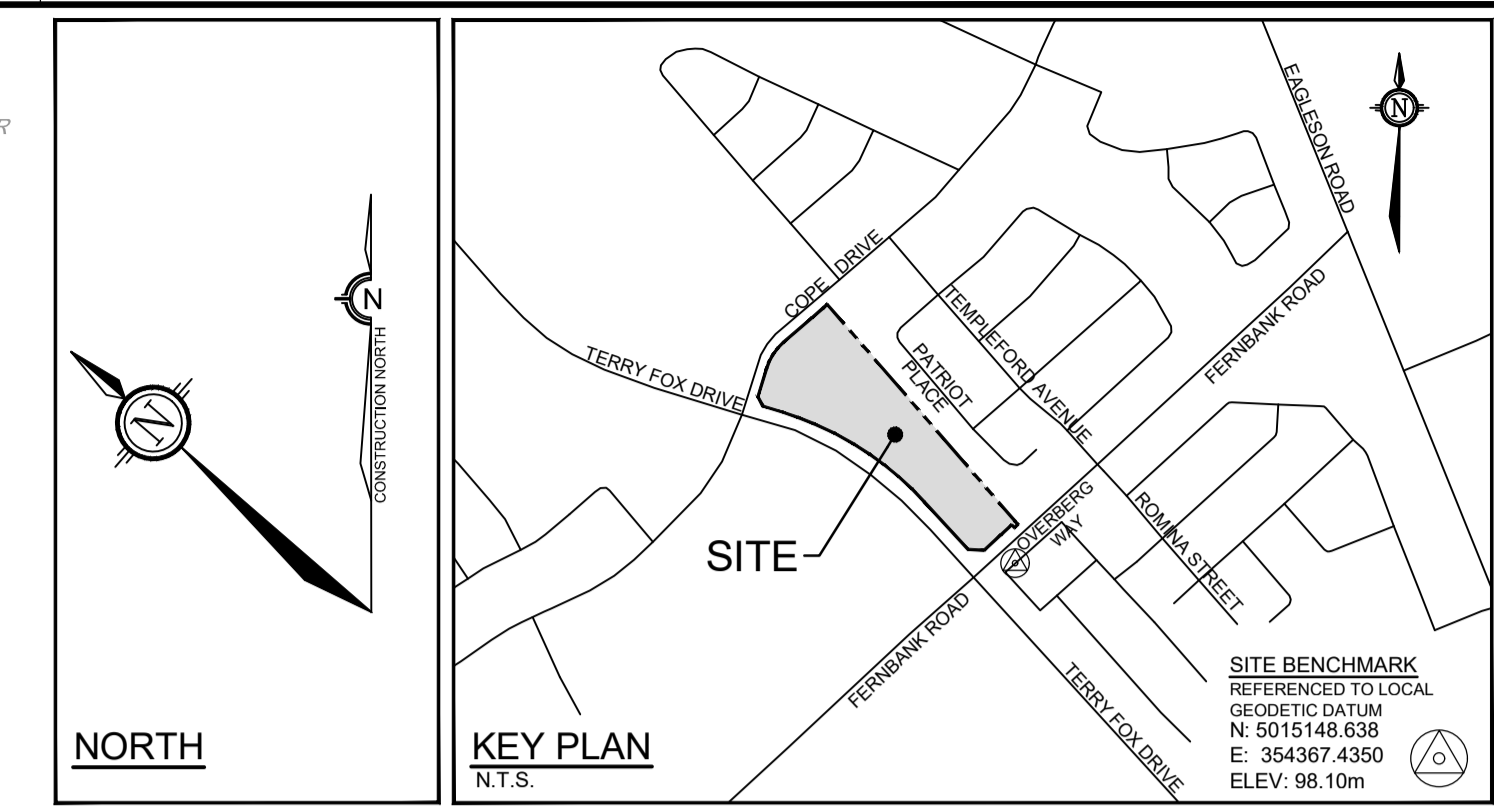
LEGEND

- SITE BOUNDARY
- PROPOSED STORM MANHOLE & SEWER
- PROPOSED SANITARY MANHOLE & SEWER
- PROPOSED WATERMAIN
- PROPOSED VALVE & VALVE BOX
- PROPOSED CURB STOP LOCATION
- PROPOSED DISTRICT METERING AREA (DMA) CHAMBER (AS PER CITY OF OTTAWA DETAIL W3.3)
- PROPOSED HYDRANT ON VALVE & VALVE BOX
- PROPOSED TWIS AS PER CITY OF OTTAWA DETAIL SCT.2
- PROPOSED TREES

- CICB 1
- CB 1
- CBMH 1
- RYE 1
- RYT 1
- PRV

- PROPOSED CURB INLET CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED REAR YARD ELBOW
- PROPOSED REAR YARD TEE
- PROPOSED PRESSURE REDUCING VALVE

NOTE:
BUILDING SERVICES TO BE 135mmØ SANITARY,
150mmØ STORM AND 38mmØ WATERMAIN



PIPE CROSSING TABLE

CROSSING #	WATERMAIN	SANITARY	STORM
1	INV = 92.98 OBV = 93.18	INV = 93.72 OBV = 93.92	INV = 94.69 OBV = 94.99
2	INV = 92.98 OBV = 93.18	INV = 93.62 OBV = 93.82	INV = 94.53 OBV = 94.98
3	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
4	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
5	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
6	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
7	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
8	INV = 93.00 OBV = 93.10	INV = 93.66 OBV = 93.86	INV = 94.53 OBV = 94.98
9	INV = 93.26 OBV = 93.46	INV = 94.00 OBV = 94.20	INV = 95.41 OBV = 95.66
10	INV = 93.26 OBV = 93.46	INV = 94.00 OBV = 94.20	INV = 95.41 OBV = 95.66
11	INV = 93.30 OBV = 93.40	INV = 94.17 OBV = 94.27	INV = 95.47 OBV = 95.67
12	INV = 93.30 OBV = 93.40	INV = 94.17 OBV = 94.27	INV = 95.47 OBV = 95.67
13	INV = 93.30 OBV = 93.40	INV = 94.17 OBV = 94.27	INV = 95.47 OBV = 95.67
14	INV = 94.63 OBV = 94.83	INV = 93.89 OBV = 94.09	INV = 94.76 OBV = 95.06
15	INV = 94.63 OBV = 94.83	INV = 93.89 OBV = 94.09	INV = 94.76 OBV = 95.06
16	INV = 94.63 OBV = 94.83	INV = 93.89 OBV = 94.09	INV = 94.76 OBV = 95.06
17	INV = 93.53 OBV = 93.73	INV = 94.27 OBV = 94.47	INV = 95.13 OBV = 95.19
18	INV = 93.53 OBV = 93.73	INV = 94.27 OBV = 94.47	INV = 95.13 OBV = 95.19
19	INV = 93.53 OBV = 93.73	INV = 94.27 OBV = 94.47	INV = 95.13 OBV = 95.19
20	INV = 94.05 OBV = 94.25	INV = 94.44 OBV = 94.64	INV = 94.65 OBV = 94.85
31	INV = 94.15 OBV = 94.35	INV = 94.89 OBV = 95.09	INV = 94.89 OBV = 95.09
32	INV = 94.40 OBV = 94.60	INV = 95.13 OBV = 95.33	INV = 95.13 OBV = 95.33

SAN MANHOLE TABLE

MANHOLE ID	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)
101	1200	1+028.42	96.94	SE=93.10 NW=93.07
103	1200	1+050.12	97.04	SE=93.56 NW=93.53
105	1200	1+065.88	97.04	NE=93.68 NW=93.62 SE=93.65 SW=93.68
107	1200	1+138.76	97.10	SE=93.93 NW=93.90 SW=93.96 NE=93.96
109	1200	1+210.01	97.35	SE=94.20 NW=94.17 NE=94.23
201	1200	3+041.42	97.14	S=93.84 NE=93.81
203	1200	3+077.08	97.23	N=94.20
205	1200	2+040.73	97.00	SW=94.11
207	1200	3+141.50	97.01	NE=94.35
209	1200	4+040.90	97.07	SW=94.39
211	1200	6+040.80	97.33	SW=94.66

STM MANHOLE TABLE

MANHOLE ID	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)
100	1500	1+029.68	96.96	N=94.10 SE=94.10
102	1500	1+051.06	97.03	NE=94.13 NW=94.13
104	1800	1+064.37	97.03	SE=94.23 SW=94.53 NE=94.68 NW=94.15
106	1500	1+136.45	97.11	SE=94.46 NE=94.76 NW=94.31 SW=94.76
108	1200	1+187.05	97.28	SE=94.60 SW=94.83 NW=94.53
110	1200	1+208.53	97.36	SE=94.65 NE=94.88 NW=94.65 SW=94.88
200	1200	3+041.42	97.14	NE=94.69 SW=94.77 NW=94.82
202	1500	3+080.10	97.38	N=94.88 W=94.88
204	1200	3+135.29	97.10	W=94.88 NE=94.93 SE=94.98

REAR YARD CATCHBASIN TABLE

CB No.	SIZE(mm)	T/G ELEV(m)	INVERT(m)	ICD SIZE (mm)
RYE4	300	96.90	NW=95.26	
RYE5	300	96.85	SE=95.15	
RYE6	300	97.40	E=94.92	
RYE7	1200	97.14	SE=95.03	94mmØ PLATE
RYE8	300	97.10	SW=95.20	
RYE9	1200	97.35	NW=95.30	
RYE10	300	97.37	SE=95.47	
RYE11	300	97.14	SW=95.64	
RYE12	300	97.16	NE=95.76	
RYE13	300	97.31	SW=95.91	
RYT7	300	97.15	SW=95.14	
RYT8	300	96.90	SW=94.90 SE=94.90	
RYT9	300	96.85	SW=94.80 NW=94.80	
RYT10	1200	97.32	NW=95.02 SE=95.02	
RYT12	300	97.07	NE=95.45 SW=95.45	
RYT13	300	97.17	SW=95.59 NE=95.59	83mmØ PLATE
RYT14	300	97.29	NE=95.72 SW=95.72	83mmØ PLATE

CATCHBASIN TABLE

CB No.	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)	ICD DIA.(mm)
CB1	600 x 600	1+019.58	96.77		
CBMH1	1500	2+025.87	96.74	SW=94.77 NE=94.77	TEMPEST LMF VORTEX 45
CBMH2	1500	4+025.87	96.84	SW=94.86 NE=94.86	83mmØ PLATE
CBMH3	1200	6+025.86	97.10	SW=94.98 NE=95.03	83mmØ PLATE
CBMH7	1200	3+025.66	96.78	SW=94.65 NE=94.58	
CBMH8	1200	3+062.79	96.92	S=94.85 N=94.85	TEMPEST LMF VORTEX 70
CBMH9	1200	3+097.52	97.14	E=95.17 NE=95.17	
CBMH10	1200	3+157	96.86	SW=94.85 NE=94.85	83mmØ PLATE
CBMH11	1800	5+017.92	97.08	NE=94.90 SE=94.95	83mmØ PLATE
CBMH13	1200	1+208.45	97.23	NE=94.91 SW=94.91	83mmØ PLATE
CICB1	600 x 600	1+100.41	96.99	NE=95.42 SW=95.42	83mmØ PLATE

STORM MANHOLES THAT REQUIRE WATERTIGHT LIDS AS PER CITY SPEC MS-22.15

MH ID
104
108
110
204

SANITARY MANHOLES THAT REQUIRE WATERTIGHT LIDS AS PER CITY SPEC MS-22.15

MH ID
105
109
205
207
209
211

- Pipes with insufficient soil cover

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND

NO.	REVISION	DATE	BY	SCALE
7.	REVISED PER CITY COMMENTS	MAR 18/26	DDB	1:400
6.	REVISED SITE PLAN SUBMISSION	NOV 14/25	DDB	
5.	RE-ISSUED FOR TENDER	JAN 18/24	DDB	
4.	ISSUED FOR TENDER	MAY 20/22	DDB	
3.	REVISED PER CITY COMMENTS	FEB 17/22	DDB	
2.	REVISED PER CITY COMMENTS	NOV 5/21	DDB	
1.	ISSUED FOR PERMIT	MAR 17/20	DDB	

FOR REVIEW ONLY

DESIGN: BM
CHECKED: DDB
DRAWN: ATE
CHECKED: BM

CITY OF OTTAWA
5331 FERNBANK ROAD
IRON VALLEY 2

DRAWING NAME: GENERAL PLAN OF SERVICES

PROJECT No.: 121011-00

REV: REV #7

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone: (613) 254-9643
Facsimile: (613) 254-5867
Website: www.novatech.ca

LEGEND

- SITE BOUNDARY
- PROPOSED STORM MANHOLE & SEWER
- PROPOSED SANITARY MANHOLE & SEWER
- PROPOSED WATERMAIN
- PROPOSED VALVE & VALVE BOX
- PROPOSED CURB STOP LOCATION
- PROPOSED DISTRICT METERING AREA (DMA) CHAMBER (AS PER CITY OF OTTAWA DETAIL W3.3)
- PROPOSED HYDRANT CAM VALVE & VALVE BOX
- PROPOSED TWSI AS PER CITY OF OTTAWA DETAIL SC7.2
- PROPOSED TREES
- PROPOSED CURB INLET CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED REAR YARD ELBOW
- PROPOSED REAR YARD TEE
- PROPOSED PRESSURE REDUCING VALVE
- EXISTING STORM MANHOLE AND SEWER
- EXISTING SANITARY MANHOLE AND SEWER
- EXISTING WATERMAIN
- EXISTING UNDERGROUND GAS
- EXISTING VALVE AND VALVE BOX
- EXISTING FIRE HYDRANT
- EXISTING CATCHBASIN
- EXISTING TOP OF GRATE
- EXISTING HYDRAULIC GRADE LINE
- EXISTING UTILITY POLE CW/GW WIRES
- EXISTING STREETLIGHT

NOTE: BUILDING SERVICES TO BE 135mmØ SANITARY, 150mmØ STORM AND 38mmØ WATERMAIN.

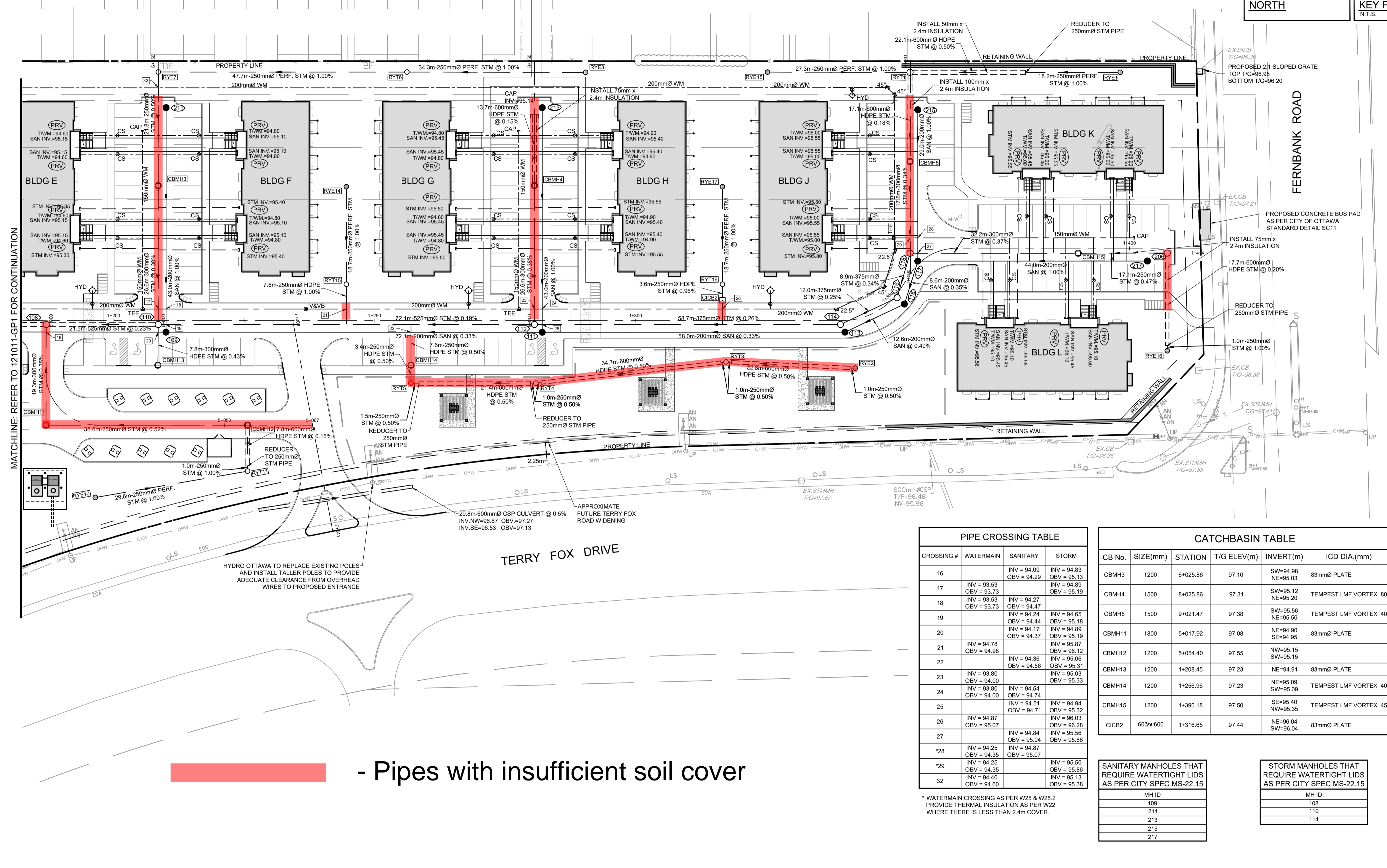
PROPOSED RETAINING WALL

NORTH

KEY PLAN

N.T.S.

SITE BENCHMARK REFERENCED TO LOCAL GEODETIC DATUM N. 5015148.638 E. 354367.4350 ELEV: 98.10m



SAN MANHOLE TABLE

MANHOLE ID	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)
109	1200	1+210.01	97.35	SE=94.20 NW=94.17 NE=94.23
111	1200	1+282.11	97.43	SE=94.47 NW=94.44 NE=94.50
113	1200	1+340.05	97.54	NW=94.66 SE=94.69
115	1200	1+351.12	97.60	NE=94.77 NW=94.74
117	1200	1+359.04	97.67	SW=94.80 SE=94.86 NE=94.83
211	1200	6+040.80	97.33	SW=94.66
213	1200	8+040.80	97.50	SW=94.93
215	1200	9+031.37	97.51	SW=95.12
217	1200	1+403.45	97.70	NW=95.30

STM MANHOLE TABLE

MANHOLE ID	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)
108	1200	1+187.05	97.28	SE=94.60 SW=94.83 NW=94.53
110	1200	1+208.53	97.36	SE=94.65 NE=94.88 NW=94.65 SW=94.88
112	1200	1+280.61	97.47	SE=94.94 NE=95.02 NW=94.79
114	1200	1+339.26	97.55	NW=95.09 SE=95.06
116	1200	1+351.13	97.61	NE=95.12 NW=95.12
118	1200	1+358.97	97.67	SE=95.23 NE=95.50 SW=95.15
206	1200	1+407.25	97.76	NW=95.48 SW=95.75

PIPE CROSSING TABLE

CROSSING #	WATERMAIN	SANITARY	STORM
16		INV = 94.09 OBV = 94.29	INV = 94.83 OBV = 95.13
17	INV = 93.53 OBV = 93.73	INV = 94.27 OBV = 94.47	INV = 94.65 OBV = 95.15
18		INV = 94.17 OBV = 94.37	INV = 94.89 OBV = 95.19
21	INV = 94.78 OBV = 94.98	INV = 94.36 OBV = 94.56	INV = 95.87 OBV = 96.12
22	INV = 93.80 OBV = 94.00	INV = 94.54 OBV = 94.74	INV = 95.03 OBV = 95.33
24	INV = 93.80 OBV = 94.00	INV = 94.54 OBV = 94.74	INV = 95.03 OBV = 95.33
25		INV = 94.51 OBV = 94.71	INV = 94.94 OBV = 95.32
26	INV = 94.87 OBV = 95.07	INV = 94.84 OBV = 95.04	INV = 96.03 OBV = 96.28
27		INV = 94.84 OBV = 95.04	INV = 95.56 OBV = 95.86
*28	INV = 94.25 OBV = 94.35	INV = 94.87 OBV = 95.07	INV = 95.56 OBV = 95.86
*29	INV = 94.25 OBV = 94.35		INV = 95.56 OBV = 95.86
32	INV = 94.40 OBV = 94.60		INV = 95.13 OBV = 95.38

CATCHBASIN TABLE

CB No.	SIZE(mm)	STATION	T/G ELEV(m)	INVERT(m)	ICD DIA.(mm)
CBM3	1200	6+025.86	97.10	SW=94.98 NE=95.03	83mmØ PLATE
CBM4	1500	8+025.86	97.31	SW=95.12 NE=95.20	TEMPEST LMF VORTEX 80
CBM5	1500	9+021.47	97.38	SW=95.56 NE=95.56	TEMPEST LMF VORTEX 40
CBM11	1800	5+017.92	97.08	NE=94.90 SE=94.95	83mmØ PLATE
CBM12	1200	5+054.40	97.55	NW=95.15 SW=95.15	
CBM13	1200	1+208.45	97.23	NE=94.91	83mmØ PLATE
CBM14	1200	1+256.96	97.23	NE=95.09 SW=95.09	TEMPEST LMF VORTEX 40
CBM15	1200	1+390.18	97.50	SE=95.40 NW=95.35	TEMPEST LMF VORTEX 45
CICB2	600Øx600	1+316.65	97.44	NE=96.04 SW=96.04	83mmØ PLATE

REAR YARD CATCHBASIN TABLE

CB No.	SIZE(mm)	T/G ELEV(m)	INVERT(m)	ICD SIZE (mm)
RYE1	300	97.47	NW=95.88	
RYE2	300	97.50	NW=95.51	
RYE3	300	97.40	NW=95.96	
RYE10	300	97.37	SE=95.47	
RYE14	300	97.50	SW=96.10	
RYE15	300	97.38	SE=95.86	
RYE16	300	97.58	NE=95.79	
RYE17	300	97.66	SW=96.26	
RYT1	1200	97.35	SW=95.59 SE=95.59 NW=95.59	
RYT3	300	97.44	SE=96.39 NW=95.41	
RYT4	300	97.26	SE=95.23 NW=95.23	
RYT5	300	97.23	NE=95.11 SE=95.11	
RYT6	300	97.18	NW=95.62 SE=95.62	
RYT7	300	97.15	SW=95.14 SE=95.14	
RYT11	300	97.58	NW=95.17 NE=95.17	
RYT15	300	97.48	NE=95.91 SW=95.91	83mmØ PLATE
RYT16	300	97.64	SW=96.07 NE=96.07	

SANITARY MANHOLES THAT REQUIRE WATERTIGHT LIDS AS PER CITY SPEC MS-22.15

MH ID
109
211
213
215
217

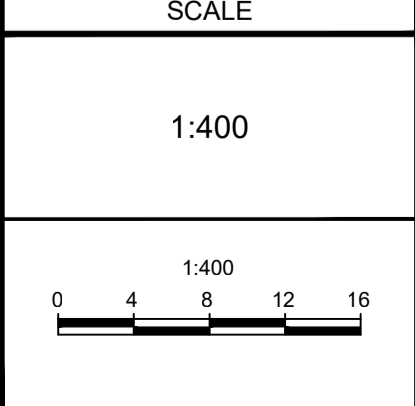
STORM MANHOLES THAT REQUIRE WATERTIGHT LIDS AS PER CITY SPEC MS-22.15

MH ID
108
110
114

* WATERMAIN CROSSING AS PER W25 & W25.2 PROVIDE THERMAL INSULATION AS PER W22 WHERE THERE IS LESS THAN 2.4m COVER.

NOTE: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

No.	REVISION	DATE	BY
7.	REVISED PER CITY COMMENTS	MAR 18/26	DOB
6.	REVISED SITE PLAN SUBMISSION	NOV 14/25	DOB
5.	RE-ISSUED FOR TENDER	JAN 18/24	DOB
4.	ISSUED FOR TENDER	MAY 20/22	DOB
3.	REVISED PER CITY COMMENTS	FEB 17/22	DOB
2.	REVISED PER CITY COMMENTS	NOV 5/21	DOB
1.	ISSUED FOR CITY OF OTTAWA REVIEW	JUN 2/21	DOB



FOR REVIEW ONLY

DESIGN	BM
CHECKED	DOB
DRAWN	ATE
CHECKED	BM
APPROVED	DOB

NOVATECH
Engineers, Planners & Landscape Architects
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CITY OF OTTAWA
5331 FERNBANK ROAD
IRON VALLEY 2

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No.
121011-00

REV #
REV #7

DRAWING No.
121011-GP2

#18539

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