PATERSON GROUP

memorandum

re: **Geotechnical Design Summary Details**
Proposed Residential Development
Arcadia – Stage 5 – Campeau Drive – Ottawa

to: Minto Communities – **Kiara Gonzales** – Kiara.Gonzales@minto.com

date: August 8, 2024

file: PG4933-MEMO.06 Revision 2

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to provide the geotechnical design summary details for the proposed residential development at the aforementioned site. Reference should be made to Paterson Group report PG4933-1 Revision 2 dated November 8, 2023.

Relevant design information is presented in Table 1 – Summary Design Details for the subject blocks and lots. The relevant design and inspection information includes the following:

- ❒ Legal lot/block number and Civic Address
- ❒ Original ground surface elevation
- ❒ Proposed finished grade elevations
- ❒ Maximum permissible grade raise
- ❒ Proposed USF elevation
- ❒ Bearing resistance values at SLS
- ❒ Seismic Site Class
- ❒ Estimated engineered fill thickness beneath footings.
- ❒ Frost protection recommendations
- ❒ Lightweight Fill (LWF) recommendations

Grading Plan Review

Paterson reviewed the following grading plan prepared by J.L. Richards for the aforementioned development:

- ❑ Conceptual Grading – Arcadia Stage 5 - JLR No. 26299-005 – Drawing No. CG1 – Revision 2 – dated July 25, 2024.

Based on the grading plans provided, all blocks/lots of the subject site exceeded our permissible grade raise elevation recommendations provided in the geotechnical report. Where significant grade raises exceedances have occurred, lightweight fill, such as expanded polystyrene (EPS) geofoam blocks, is recommended for specific areas adjacent to the subject buildings. Surcharging may also be considered suitable for reducing or eliminating the requirement for lightweight fill, and as has been implemented and described in the following section of this memorandum.

Table 1 provides a grading summary and lightweight fill (LWF) requirements for the subject buildings based on our grading plan review. LWF material specifications and cover recommendations are provided in Table 1 and Figure 1 attached.

Settlement Surcharge Program and Subgrade Improvement

The settlement surcharge program was undertaken for the majority of the subject site with the exception of Block 73 (all units) and Block 74 – Unit A (southeastern end-unit). The settlement surcharge program was designed to eliminate excessive settlement associated with permissible grade raise exceedances that have occurred based on the proposed grading.

All lots/blocks located within the settlement surcharge program whose proposed grading exceeds the recommended grade raise recommendations will not require lightweight fill to accommodate the proposed grading upon successful completion of the surcharge program. Since surcharging has not been undertaken within the footprint of Block 73 and Block 74 – Unit A, lightweight fill has been provided considering grade raises exceedances in Table 1.

Where footings will be founded within the previously placed surcharge fill material, it is recommended to sub-excavate a minimum of 300 mm below the design USF elevation and to proof-roll the existing fill using a suitably sized vibratory sheepsfoot roller, under dry conditions and above freezing temperatures. Paterson should review and approve the proof-rolling work. If the proof-rolled surface is considered acceptable at the time of construction, the sub-excavation should be in-filled with OPSS Granular A or Granular B Type II crushed stone placed in maximum 300 mm thick loose lifts and compacted to a minimum of 98% of the materials SPMDD.

Where more than 1.0 m of fill will be in place below the above-noted sub-excavation, Paterson will provide additional recommendations and advise on appropriate subgrade preparation measures at the time of detailed design. This may consist of re-working existing fill to be in a more compact and appropriate state for the support of building foundations, thickening engineered fill pads and/or the use reinforcement such as bi-axial geogrid layers. This will be determined at a later stage of design.

Bearing Resistance Values for Foundation Design

Based on our review of the above-noted grading plans, it is expected that the buildings will be founded over an undisturbed bearing surface consisting of one of the following:

Table 1 - Bearing Resistance Values		
Bearing Surface	**Bearing Resistance Values at SLS (kPa)**	**Factored Bearing Resistance Value at ULS (kPa)**
Very Stiff to Stiff Silty Clay	150	225
Engineered Fill over Engineered Silty Clay Fill	100	150
Engineered Fill over Silty Clay Crust	150	225
Note: Strip footings, up to 2 m wide, and pad footings, up to 4 m wide, placed over a silty clay bearing surface can be designed using the above noted bearing resistance values.		

The bearing resistance values are provided on the assumption that the footings will be placed on undisturbed soil bearing surfaces. An undisturbed soil bearing surface consists of one from which all topsoil and deleterious materials, such as loose, frozen or disturbed soil, whether in situ or not, have been removed, in the dry, prior to the placement of concrete for footings.

Protection of Footings Against Frost Action

Based on our review, some units were noted to be provided with insufficient soil cover to protect footings against frost action. It should be noted that to accommodate the absence of sufficient soil frost cover (minimum 1.5 m for heated footings) for the proposed footings, alternative forms of frost protection may be considered to provide sufficient protection against frost.

Based on our review, the following frost protection using rigid insulation is recommended to be placed at the specified townhouse lots as specified below to provide sufficient protection to footings against frost action:

- **Lots 21 to 31 and Blocks 69 to 72:** Based on our review, the rear half of the footings for these structures will be founded within the depth of frost migration and have insufficient soil cover for adequate frost protection. A minimum 100 mm thick layer of extruded polystyrene boards such as Dow Chemical High-Load 40 (HI-40), or equivalent other approved by Paterson, will be required below the rear half of the building's perimeter strip footings. Further, a minimum 100 mm thick layer of SM rigid insulation or equivalent should extend a minimum of 1,800 mm horizontally beyond the exterior face of strip footings along the rear half of the insulated strip footings.

Rigid insulation boards should be placed upon a level and flat surface and with negligible gaps between abutting boards. Consideration can be given to placing a thin levelling mat consisting of a layer of compacted OPSS Granular A crushed stone, stone dust or sand below the insulation layer, as required. The placement of the insulation layers should be reviewed and approved by Paterson personnel at the time of construction.

Minor Adjustments to Lot Grading and Design Details During Construction Phase

It is anticipated that there may be minor discrepancies between the latest reviewed grading plan and the permit plot plans that will be prepared for some of the lots/townhouse blocks during the final permitting and construction phase of the proposed structures. The discrepancy is anticipated to arise due to minor changes required by the building designer to accommodate finishes such as risers and entrances to the design grading. In our experience, minor adjustments are required to the design USF elevations and occasionally finished grades surrounding the structure.

Based on Paterson's review of site-specific conditions, since there are grade raise exceedances being accommodated by either a surcharge program or lightweight fill, it is recommended that Paterson review all minor changes to grading during the permit plot plan review phase.

Tree Planting Setbacks

In accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines), Paterson completed a soils review of the site to determine applicable tree planting setbacks. Atterberg limits testing was completed for recovered silty clay samples at selected locations throughout the subject site. Grain size distribution and Sieve analysis testing was also completed on selected soil samples. The above noted test results were completed between design underside of footing elevation and a 3.5 m depth below finished grade. The results of our testing are presented in Tables 1 and 2 in Subsection 4.1 and in Appendix 1 of the current Geotechnical Report.

Based on the results of the representative soil samples, the subject site will be located upon a deposit of low to medium plasticity clay with a low to medium potential for soil volume change for tree planting according to the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines).

Since the modified plasticity limit (PI) does not exceed 40%, large trees (mature height over 14 m) can be planted at the subject site 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).

According to the City of Ottawa Tree Planting Guidelines, tree planting setback limits may be reduced to 4.5 m for small (mature tree height up to 7.5 m) and medium size trees (mature tree height 7.5 m to 14 m) provided that the following conditions are met:

- ❑ The underside of footing (USF) extends to 2.1 m or greater below the lowest finished grade 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. However, due to the thickness of the fill material within the subject site, this condition is not required as the native silty clay material is well below the proposed underside of footing elevations (at least 3 m below proposed USF levels).
- ❑ A small tree must be provided with a minimum of 25 m^3 of available soil volume while a medium tree must be provided with a minimum of 30 m^3 of available soil volume, or a volume that is appropriate to the species selected, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted 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.
- ❑ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree).

In-Ground Swimming Pools

The in-situ soils are considered to be acceptable for the installation of in-ground swimming pools. The soil removed to accommodate an in-ground swimming pool weighs more than the water filled in-ground pool. Therefore, no additional load is being applied to the underlying sensitive clays.

Aboveground Swimming Pools, Hot Tubs and Exterior Decks

If consideration is given to construction of an above ground swimming pool, a hot tub or an exterior deck, a geotechnical consultant should be retained by the homeowner to review the site conditions. No additional grading should be placed around the exterior structure.

The swimming pool should be located at least 3 m away from the existing foundation to avoid adding localized loading to the foundation and the hot tub should be located at least 2 m away from the existing foundation. Otherwise, construction is considered routine, and can be constructed in accordance with the manufacturer's specifications.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

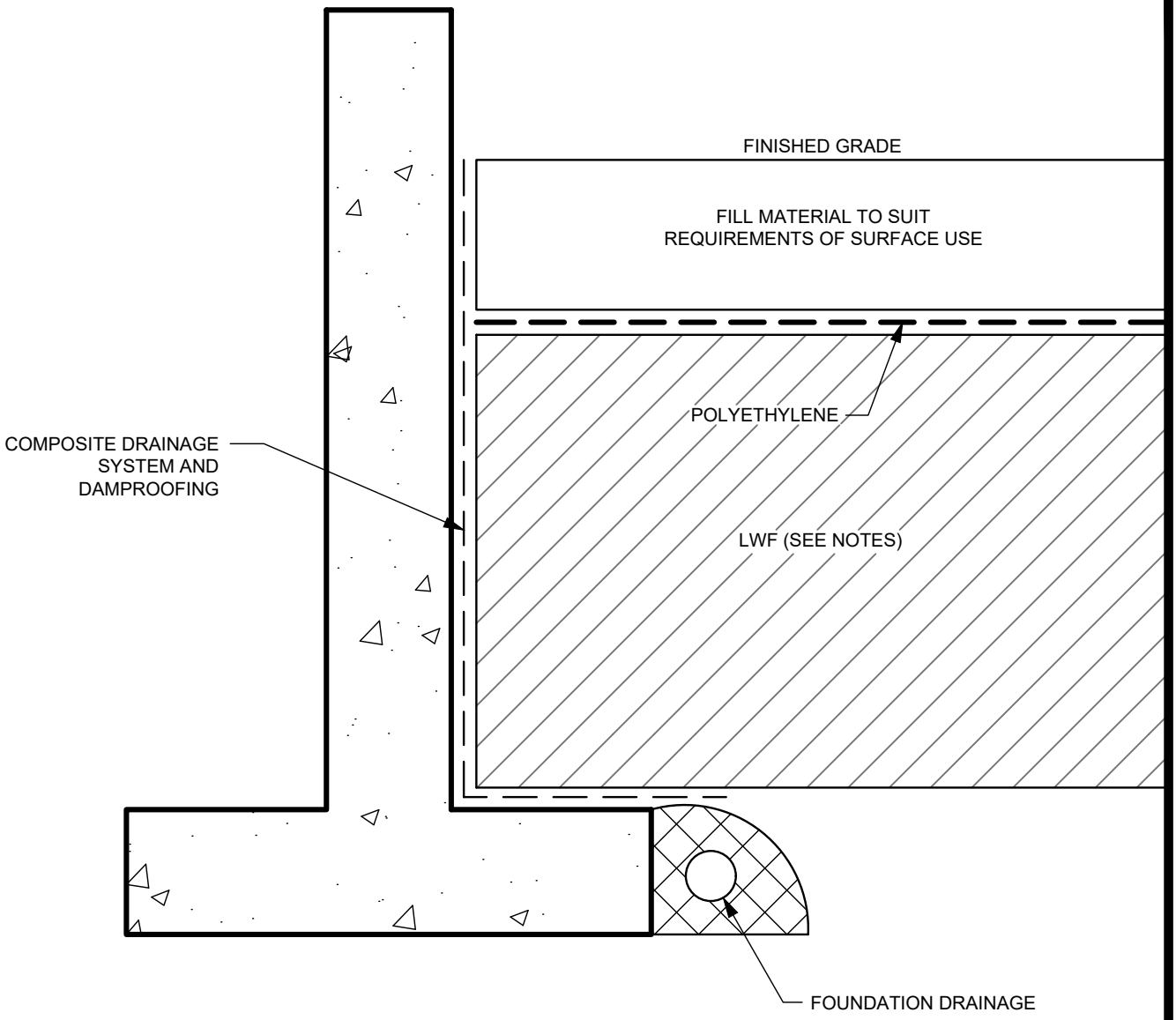
August 8, 2024

Drew Petahtegoose, P.Eng.

Faisal I. Abou-Seido, P.Eng.

Attachments

- Figure 1 – EPS Block Installation Around Residential Buildings
- Table 1 – Summary of Design Details



NOTES:

1. USE EPS12 BELOW FRONT PORCH

2. USE EPS15 BELOW GARAGE AND DRIVEWAY
   USE EPS12 BELOW LANDSCAPED AREAS

3. MINIMUM GRANULAR THICKNESS OVER LWF SHOULD BE AS FOLLOWS:

FRONT PORCH	150mm OF OPSS GRANULAR A
GARAGE	300mm OF OPSS GRANULAR A
DRIVEWAY	300mm OF OPSS GRANULAR A
LANSCAPED	500mm OF APPROVED BACKFILL SOIL

4. PLACEMENT OF LWF SHOULD BE ON A LEVELED SURFACE (SAND CAN BE USED TO PROVIDE AN ADEQUATE LEVELLING SURFACE).

PATERSON GROUP

EPS BLOCK INSTALLATION AROUND RESIDENTIAL BUILDINGS

Drawing No.:	Scale:
FIGURE 1	N.T.S.
Drawn: MPG	Approved: DJG

Table 1 - Summary of Design Details - PG4933
Minto Communities - Arcadia - Stage 5

Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
n/a	Lot 1	Street No.1	Single	93.65	95.90	93.65	95.90	94.20	100	n/a	n/a	94.00	1.90	1.90	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 2	Street No.1	Single	94.00	95.90	94.00	95.90	94.20	100	n/a	n/a	94.00	1.90	1.90	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 3	Street No.1	Single	94.00	95.90	94.00	95.90	94.20	100	n/a	n/a	94.00	1.90	1.90	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 4	Street No.1	Single	93.50	95.90	93.50	95.90	94.20	100	n/a	n/a	94.00	1.90	1.90	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 5	Street No.1	Single	93.50	95.90	93.50	95.90	94.20	100	n/a	n/a	94.00	1.90	1.90	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 6	Street No.1	Single	94.00	95.85	94.00	95.85	94.15	100	n/a	n/a	94.50	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 7	Street No.1	Single	93.80	95.85	93.55	95.85	94.15	100	n/a	n/a	94.50	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 8	Street No.1	Single	93.50	95.85	93.50	95.85	94.15	100	n/a	n/a	94.50	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 9	Street No.1	Single	93.20	95.85	93.20	95.85	94.15	100	n/a	n/a	94.50	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 10	Street No.1	Single	93.25	96.10	93.55	96.10	94.40	100	n/a	n/a	94.50	1.60	1.60	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 11	Street No.1	Single	93.30	96.10	93.60	96.10	94.40	100	n/a	n/a	94.50	1.60	1.60	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 12	Street No.1	Single	93.35	96.10	93.65	96.10	94.40	100	n/a	n/a	94.50	1.60	1.60	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 13	Street No.1	Single	93.40	96.35	93.70	96.35	94.45	100	n/a	n/a	94.50	1.85	1.85	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 14	Street No.1	Single	93.45	96.35	93.75	96.35	94.45	100	n/a	n/a	94.50	1.85	1.85	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 15	Street No.1	Single	93.40	96.35	93.60	96.35	94.45	100	n/a	n/a	94.50	1.85	1.85	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 16	Street No.1	Single	93.35	96.35	93.45	96.35	94.45	100	n/a	n/a	94.50	1.85	1.85	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	Lot 17	Street No.1	Single	93.30	96.15	93.45	96.15	94.65	100	n/a	n/a	94.50	1.65	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 18	Street No.1	Single	93.27	96.15	93.37	96.15	94.65	100	n/a	n/a	94.50	1.65	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

Table 1 - Summary of Design Details - PG4933

Minto Communities - Arcadia - Stage 5

Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
n/a	Lot 19	Street No.1	Single	93.20	96.15	93.30	96.15	94.65	100	n/a	n/a	94.50	1.65	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 20	Street No.1	Single	93.09	96.15	93.15	96.15	94.65	100	n/a	n/a	94.50	1.65	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 21	Street No.1	Single	93.09	96.35	93.15	94.25	94.65	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.85	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 22	Street No.1	Single	93.03	96.35	93.05	94.25	94.65	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.85	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 23	Street No.1	Single	93.00	96.35	93.03	94.25	94.65	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.85	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 24	Street No.1	Single	92.95	96.35	92.98	94.25	94.65	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.85	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 25	Street No.1	Single	92.92	96.35	92.95	94.25	94.65	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.85	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 26	Street No.1	Single	92.90	95.90	92.93	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 27	Street No.1	Single	92.87	95.90	92.90	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 28	Street No.1	Single	92.85	95.90	92.88	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 29	Street No.1	Single	92.82	95.90	92.70	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 30	Street No.1	Single	92.80	95.90	92.70	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 31	Street No.1	Single	92.77	95.90	92.40	94.00	94.40	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.50	1.40	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 32	Street No.1	Single	92.73	95.95	92.60	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 33	Street No.1	Single	92.71	95.95	92.71	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
n/a	Lot 34	Street No.1	Single	92.77	95.95	92.70	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 35	Street No.1	Single	92.84	95.95	92.73	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 36	Street No.1	Single	92.91	95.95	92.76	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 37	Street No.1	Single	92.98	95.95	92.79	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 38	Street No.1	Single	93.05	95.95	92.82	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 39	Street No.1	Single	93.12	95.95	92.85	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 40	Street No.1	Single	93.19	95.95	92.88	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 41	Street No.1	Single	93.27	95.95	92.88	96.15	94.25	100	n/a	n/a	94.50	1.45	1.65	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 42	Street No.1	Single	92.85	96.20	92.97	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 43	Street No.1	Single	92.89	96.20	93.01	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 44	Street No.1	Single	92.93	96.20	93.05	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 45	Street No.1	Single	92.97	96.20	93.09	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 46	Street No.1	Single	93.01	96.20	93.13	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 47	Street No.1	Single	93.05	96.20	93.17	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	Lot 48	Street No.1	Single	93.09	96.20	93.20	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
n/a	**Lot 49**	**Street No.1**	Single	93.12	96.20	93.23	96.50	94.50	100	n/a	n/a	94.50	1.70	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	**Lot 50**	**Street No.1**	Single	93.33	95.90	93.23	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 51**	**Street No.1**	Single	93.28	95.90	93.20	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 52**	**Street No.1**	Single	93.25	95.90	93.17	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 53**	**Street No.1**	Single	93.20	95.90	93.17	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 54**	**Street No.1**	Single	93.16	95.90	93.13	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 55**	**Street No.1**	Single	93.12	95.90	93.09	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	**Lot 56**	**Street No.1**	Single	93.12	95.90	93.05	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	**Lot 57**	**Street No.1**	Single	93.08	95.90	92.97	96.50	94.40	100	n/a	n/a	94.50	1.40	2.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
n/a	**Lot 58**	**Street No.1**	Single	93.40	95.90	93.40	95.90	94.20	100	n/a	n/a	94.90	1.00	1.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 59**	**Street No.1**	Single	93.44	95.90	93.44	95.90	94.20	100	n/a	n/a	94.90	1.00	1.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 60**	**Street No.1**	Single	93.48	95.90	93.48	95.90	94.20	100	n/a	n/a	94.90	1.00	1.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 61**	**Street No.1**	Single	93.51	95.90	93.51	95.90	94.20	100	n/a	n/a	94.90	1.00	1.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
n/a	**Lot 62**	**Street No.1**	Single	93.53	95.90	93.53	95.90	94.20	100	n/a	n/a	94.90	1.00	1.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 63	Unit A	Street No.2	End	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.2	Interior	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.2	Interior	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.2	Interior	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.2	Interior	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.2	End	93.50	96.20	93.50	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 64	Unit A	Street No.2	End	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.2	Interior	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.2	Interior	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.2	Interior	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.2	Interior	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.2	End	93.75	96.20	93.75	96.20	94.10	100	n/a	n/a	94.50	1.70	1.70	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 65	Unit A	Street No.3	End	93.27	95.85	93.27	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.3	Interior	93.32	95.85	93.32	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.3	Interior	93.37	95.85	93.37	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.3	Interior	93.40	95.85	93.40	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.3	Interior	93.47	95.85	93.47	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.3	Interior	93.50	95.85	93.50	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit G	Street No.3	End	92.53	95.85	92.53	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 66	Unit A	Street No.5	End	92.54	96.25	92.88	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.54	96.25	92.88	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.55	96.25	92.85	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.56	96.25	92.85	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	End	92.57	96.25	92.82	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Minto Communities - Arcadia - Stage 5

Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 67	Unit A	Street No.5	End	92.58	96.25	92.79	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.58	96.25	92.76	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.59	96.25	92.73	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.59	96.25	92.70	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	Interior	92.60	96.25	92.70	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.5	End	92.60	96.25	92.71	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 68	Unit A	Street No.5	End	92.55	96.25	92.70	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.50	96.25	92.60	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.43	96.25	92.55	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.38	96.25	92.50	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	Interior	92.33	96.25	92.50	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.5	End	92.33	96.25	92.50	96.25	94.15	100	n/a	n/a	94.90	1.35	1.35	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

Table 1 - Summary of Design Details - PG4933

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 69	Unit A	Street No.5	End	92.33	96.05	92.40	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.33	96.05	92.40	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.33	96.05	92.40	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	End	92.33	96.05	92.40	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 70	Unit A	Street No.5	End	92.31	96.05	92.05	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.29	96.05	92.05	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.27	96.05	92.05	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.26	96.05	92.05	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	Interior	92.26	96.05	92.05	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.5	End	92.24	96.05	92.08	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 71	Unit A	Street No.5	End	92.20	96.05	92.11	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.20	96.05	92.13	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.20	96.05	92.13	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.22	96.05	92.15	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	Interior	92.24	96.05	92.17	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.5	End	92.26	96.05	92.20	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.15	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 72	Unit A	Street No.5	End	92.26	96.25	92.26	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.35	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.5	Interior	92.26	96.25	92.26	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.35	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.5	Interior	92.26	96.25	92.26	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.35	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Interior	92.26	96.25	92.26	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.35	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	End	92.26	96.25	92.26	93.75	94.15	100	n/a	Extend rear footings to provide a minimum of 1.5 m of soil cover or insulate by providing minimum 100 mm thick layer of rigid insulation extending a minimum of 1.8 m horizontally and beyond rear footings.	94.90	1.35	0.00	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front and rear footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 73	Unit A	Street No.3	End	93.40	95.85	93.43	95.85	94.15	150	n/a	n/a	94.90	0.95	0.95	1.05	n/a	n/a	1.50	1.2 m thick LWF along front extending 2.4 m beyond building face and 1.2 m thick LWF along front half of the sides extending 1.2 m beyond building sides and 1.0 m thick LWF along rear extending 2.4 m beyond building face and 1.0 m thick LWF along rear half of the sides extending 1.2 m beyond building sides	It is recommended to sub-excavate existing fill to native subsoils and reinstate with engineered fill or other suitable workable fill reviewed and approved by Paterson at the time of cosntruction. LWF recommendations for front of unit consider placement of engineered fill below USF.	D
	Unit B	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	150	n/a	n/a	94.90	0.95	0.95	1.05	n/a	n/a	1.50	1.2 m thick LWF along front extending 2.4 m beyond building face and 1.0 m thick LWF along rear extending 2.4 m beyond building face	It is recommended to sub-excavate existing fill to native subsoils and reinstate with engineered fill or other suitable workable fill reviewed and approved by Paterson at the time of cosntruction. LWF recommendations for front of unit consider placement of engineered fill below USF.	D
	Unit C	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	150	n/a	n/a	94.90	0.95	0.95	1.05	n/a	n/a	1.50	1.2 m thick LWF along front extending 2.4 m beyond building face and 1.0 m thick LWF along rear extending 2.4 m beyond building face	It is recommended to sub-excavate existing fill to native subsoils and reinstate with engineered fill or other suitable workable fill reviewed and approved by Paterson at the time of cosntruction. LWF recommendations for front of unit consider placement of engineered fill below USF.	D
	Unit D	Street No.3	End	93.40	95.85	93.43	95.85	94.15	150	n/a	n/a	94.90	0.95	0.95	1.05	n/a	n/a	1.50	1.2 m thick LWF along front extending 2.4 m beyond building face and 1.0 m thick LWF along front half of the sides extending 1.2 m beyond building sides and 1.0 m thick LWF along rear extending 2.4 m beyond building face and 1.0 m thick LWF along rear half of the sides extending 1.2 m beyond building sides	It is recommended to sub-excavate existing fill to native subsoils and reinstate with engineered fill or other suitable workable fill reviewed and approved by Paterson at the time of cosntruction. LWF recommendations for front of unit consider placement of engineered fill below USF.	D
Block 74	Unit A	Street No.3	End	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	1.05	0.30	n/a	1.50	1.2 m thick LWF along front extending 2.4 m beyond building face and 1.0 m thick LWF along front half of the sides extending 1.2 m beyond building sides and 1.0 m thick LWF along rear extending 2.4 m beyond building face and 1.0 m thick LWF along rear half of the sides extending 1.2 m beyond building sides	It is recommended to sub-excavate existing fill to native subsoils and reinstate with engineered fill or other suitable workable fill reviewed and approved by Paterson at the time of cosntruction. LWF recommendations for front of unit consider placement of engineered fill below USF.	D
	Unit B	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.3	End	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 75	Unit A	Street No.3	End	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.3	Interior	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.3	End	93.40	95.85	93.43	95.85	94.15	100	n/a	n/a	94.90	0.95	0.95	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 76	Unit A	Winterset Road	End	93.45	96.00	93.43	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Winterset Road	Interior	93.47	96.00	93.44	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Winterset Road	Interior	93.49	96.00	93.45	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Winterset Road	Interior	93.51	96.00	93.46	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Winterset Road	Interior	93.53	96.00	93.47	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Winterset Road	End	93.53	96.00	93.48	96.00	93.90	100	n/a	n/a	94.90	1.10	1.10	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 77	Unit A	Winterset Road	End	93.62	95.80	93.43	95.80	93.90	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Winterset Road	Interior	93.60	95.80	93.43	95.80	93.90	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Winterset Road	Interior	93.58	95.80	93.43	95.80	93.90	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Winterset Road	End	93.56	95.80	93.43	95.80	93.90	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 78	Unit A	Winterset Road	End	93.85	96.20	93.77	96.20	93.90	100	n/a	n/a	94.00	2.20	2.20	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Winterset Road	Interior	93.81	96.20	93.72	96.20	93.90	100	n/a	n/a	94.00	2.20	2.20	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Winterset Road	Interior	93.78	96.20	93.70	96.20	93.90	100	n/a	n/a	94.00	2.20	2.20	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Winterset Road	Interior	93.74	96.20	93.78	96.20	93.90	100	n/a	n/a	94.00	2.20	2.20	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Winterset Road	End	93.71	96.20	93.85	96.20	93.90	100	n/a	n/a	94.00	2.20	2.20	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 79	Unit A	Street No.2	End	92.55	96.15	93.85	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.2	Interior	92.57	96.15	93.80	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.2	Interior	92.59	96.15	93.70	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.2	Interior	92.61	96.15	93.70	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.2	Interior	92.63	96.15	93.72	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.2	End	92.65	96.15	93.77	96.15	94.05	100	n/a	n/a	94.00	2.15	2.15	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 80	Unit A	Street No.2	End	93.72	95.80	93.65	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.2	Interior	93.76	95.80	93.69	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.2	Interior	93.80	95.80	93.73	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.2	End	93.84	95.80	93.77	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 81	Unit A	Street No.2	End	93.84	95.80	93.77	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.2	Interior	93.88	95.80	93.81	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.2	End	93.92	95.80	93.85	95.80	94.10	100	n/a	n/a	94.00	1.80	1.80	0.30	0.30	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 82	Unit A	Street No.4	Back to Back	93.30	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.4	Back to Back	93.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.4	Back to Back	93.20	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.4	Back to Back	93.15	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.4	Back to Back	93.10	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.4	Back to Back	93.05	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit G	Street No.4	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit H	Street No.5	Back to Back	92.72	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit I	Street No.5	Back to Back	92.75	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit J	Street No.5	Back to Back	92.77	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit K	Street No.5	Back to Back	92.80	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit L	Street No.5	Back to Back	92.82	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit M	Street No.5	Back to Back	92.85	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit N	Street No.5	Back to Back	92.90	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 83	Unit A	Street No.4	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.4	Back to Back	92.90	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.4	Back to Back	92.80	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.4	Back to Back	92.70	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.4	Back to Back	92.60	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.4	Back to Back	92.55	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit G	Street No.5	Back to Back	92.60	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit H	Street No.5	Back to Back	92.63	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit I	Street No.5	Back to Back	92.67	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit J	Street No.5	Back to Back	92.71	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit K	Street No.5	Back to Back	92.72	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit L	Street No.5	Back to Back	92.72	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 84	Unit A	Street No.3	Back to Back	92.55	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit B	Street No.3	Back to Back	92.50	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit C	Street No.3	Back to Back	92.45	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.3	Back to Back	92.37	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 84	Unit E	Street No.4	Back to Back	92.32	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.4	Back to Back	92.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit G	Street No.4	Back to Back	92.37	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit H	Street No.5	Back to Back	92.40	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit I	Street No.5	Back to Back	92.43	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit J	Street No.5	Back to Back	92.45	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit K	Street No.5	Back to Back	92.50	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit L	Street No.5	Back to Back	92.55	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
Block 85	Unit A	Street No.5	Back to Back	93.40	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.5	Back to Back	93.32	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.5	Back to Back	93.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.5	Back to Back	93.17	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.5	Back to Back	93.10	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 85	Unit F	Street No.5	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit G	Street No.4	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit H	Street No.4	Back to Back	93.10	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit I	Street No.4	Back to Back	93.17	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit J	Street No.4	Back to Back	93.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit K	Street No.4	Back to Back	93.32	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit L	Street No.4	Back to Back	93.40	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 86	Unit A	Street No.5	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.5	Back to Back	93.05	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.5	Back to Back	93.10	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit D	Street No.5	Back to Back	93.15	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit E	Street No.5	Back to Back	93.20	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit F	Street No.5	Back to Back	93.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit G	Street No.4	Back to Back	92.55	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit H	Street No.4	Back to Back	92.65	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 86	Unit I	Street No.4	Back to Back	92.75	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit J	Street No.4	Back to Back	92.85	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit K	Street No.4	Back to Back	92.95	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit L	Street No.4	Back to Back	93.00	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
Block 87	Unit A	Street No.5	Back to Back	93.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit B	Street No.5	Back to Back	93.05	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	-	D
	Unit C	Street No.5	Back to Back	92.85	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit D	Street No.5	Back to Back	92.65	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit E	Street No.5	Back to Back	92.45	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit F	Street No.5	Back to Back	92.29	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit G	Street No.4	Back to Back	92.25	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

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Block Number	Lot Number	Street No.	Dwelling Type	Original GS Front (m)	Proposed GS Front (m)	Original GS Rear (m)	Proposed GS Rear (m)	Underside of Footing Elevation (m)	Bearing Resistance Value at SLS (kPa)	Frost Protection Required Front	Frost Protection Required Rear	Permissible Grade Raise Elevation (m)	Above Permissible Grade Raise Front (m)	Above Permissible Grade Raise Rear (m)	Engineered Fill Thickness (Front) (m)	Engineered Fill Thickness (Rear) (m)	Surcharge Program	Minimum Thickness LWF in Garage and Front Porch (m)	Minimum Thickness LWF and Extents (m)	Additional Notes	Seismic Site Class
Block 87	Unit H	Street No.4	Back to Back	92.30	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit I	Street No.4	Back to Back	92.37	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit J	Street No.4	Back to Back	92.42	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit K	Street No.4	Back to Back	92.50	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D
	Unit L	Street No.4	Back to Back	92.55	96.20	n/a	n/a	94.20	100	n/a	n/a	94.90	1.30	n/a	0.30	n/a	Ongoing	n/a	n/a upon successful completion of surcharge program.	Due to more than 1.0 meter of fill being in place below the 300 mm thick engineered fill under the front footings, Paterson will provide additional recommendations such as re-working existing fill to be more compact, thickening engineered fill pads, and/or using reinforcement such as bi-axial geogrid layers. These measures will be determined at a later stage of design.	D

Notes:

- Proposed grade raise information was based on the following grading plans prepared by J. L. Richards.:
- Conceptual Grading – Arcadia Stage 5 - JLR No. 26299-005 – Drawing No. CG1 – Revision 2 – dated July 25, 2024.
- Rigid insulation thicknesses are expected to be modified as part of future revisions of the grading plan review once the proposed thickness of engineered fill will be known at a later time of review.

Revision and Changes Tracking

- Revision 1: Revised to reflect updated conceptual grading.
- Revision 2: Revision to tree planting setback information.