



Kent Macpherson

June 28, 2017

Current Planning Department
City of Kelowna
1435 Water Street
Kelowna, BC, V1Y 1J4

Attention: Ryan Smith, Department Manager, Community Planning

**Re: Rezoning Application
405 Poplar Point Drive, Kelowna – Lot A, Plan EPP47591, ODYD**

Applicant: Fred Hamel

Please accept this application to rezone the property at 405 Poplar Point Drive in Kelowna from RU1 (Large Lot Housing) to RU6 (Two Dwelling Housing).

The subject site is 0.828 acres and has frontage on both Poplar Point Drive and Herbert Heights Road. Located in the Kelowna North Neighborhood, it has been a residential property since it was originally subdivided in 1954. There are full municipal services in close proximity both road frontages of the site, providing a unique opportunity for the city to realize their goal of environmentally sensitive infill development.

By rezoning the property to RU6, the property will be able to accommodate a second dwelling located off of Herbert Heights Road. Through appropriate design, the future buildings foundation will be utilized to further stabilize the hillside while retaining the natural character and ecology of the hillside. We have engaged a team of local professionals that have helped guide the design and will continue to be engaged in the design of any future construction on site.

Our team consists of:

Architect

Jim Meiklejohn

Meiklejohn Architects Inc

Environmental

Jason Schleppe

Ecoscapes Environmental Consultants

| | | |
|---------------------------|--------------|-------------------------------|
| Foundation & Construction | Gord Wilson | Team Construction |
| Geotechnical Engineer | Jeremy Block | Interior Testing Services Ltd |
| Surveyor | Neil Denby | Runnalls Denby Land Surveying |

As mentioned, the development will be sensitively integrated into the natural setting, allowing for native vegetation to be replanted in order to control potential erosion, landslip, and rock falls. This will ultimately protect vital local ecological values while maintaining slope stability. As confirmed in the included geotechnical report published by local firm Interior Testing Services, provided that the proposed home is satisfactorily pinned to competent bedrock by micro piles or similar and all drainage water is collected and directed offsite, in their opinion they can conclude that the described parcel is suitable for the intended residential development. The geotechnical risk appears to be within the level of safety currently accepted by the governing authority.

Some site elements that we are proposing will include:

- Native planting on the entire sloped portions
- No exterior irrigation
- Low profile roof
- Rainwater collection

We have worked with Meiklejohn Architects Inc to create a house that will blend into the surrounding environment; seamlessly fitting into the existing rhythm of the neighbourhood and have minimal impact on any surrounding properties view. The proposed house has been designed to utilize the existing grade of the property in a two story format and is proposed in the style and location that we would be prepared to construct.

We were encouraged to watch the City work with the community during their recent Infill Challenge, and believe that by rezoning this subject property to RU6, we can meet many of the same infill goals.

By rezoning the subject property to permit a secondary house, we meet a plethora of OCP Goals around appropriate housing. The only OCP Goal that is not conforming to is Objective 5.15.12. This policy prohibits development on steep slopes (over 30%). The 30% slope has been encouraged for new development to ensure adequate greenspace, and to prevent any slope stability issues. We have attempted to remove these concerns by working with experts in various fields to ensure the end product is a benefit to the community, opposed to a detriment.

Within the Official Community Plan, infill housing represents an important part of the City of Kelowna's overall strategy to offset the impacts of urban sprawl. By permitting new development in the Poplar Point community urban infill will be achieved, reducing traffic and greenhouse gas emissions by drawing residential density closer to downtown Kelowna. The development will capitalize on existing infrastructure making an efficient use of the utilities based off of Herbert Heights Rd.


We look forward to working with the City to see this subject property densified and used as appropriate urban infill in our community.

If you have any questions pertaining to this Application, please do not hesitate to contact me.

Sincerely,

KENT-MACPHERSON

Per:

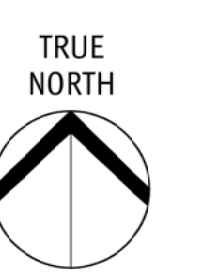


J. Hettinga, B.Sc., RI



201-75 FRONT STREET
 PENTICTON, B.C.
 V2A 1H2
 TEL: 250.492.3143
 EMAIL: pen-mal@shaw.ca

233 BERNARD AVENUE
 KELOWNA, B.C.
 V1Y 6N2
 TEL: 250.762.3004
 EMAIL: kel-mal@shaw.ca



Copyright reserved. This plan and design is and at all times remains the exclusive property of Meiklejohn Architects Inc. and may not be used without the Architects' consent.

| No. | Date | Revision |
|-----|------|----------|
| | | |
| | | |
| | | |
| | | |

Project Title
POPLAR POINT RESIDENCE

405 POPLAR POINT DRIVE KELOWNA
 Drawing Number

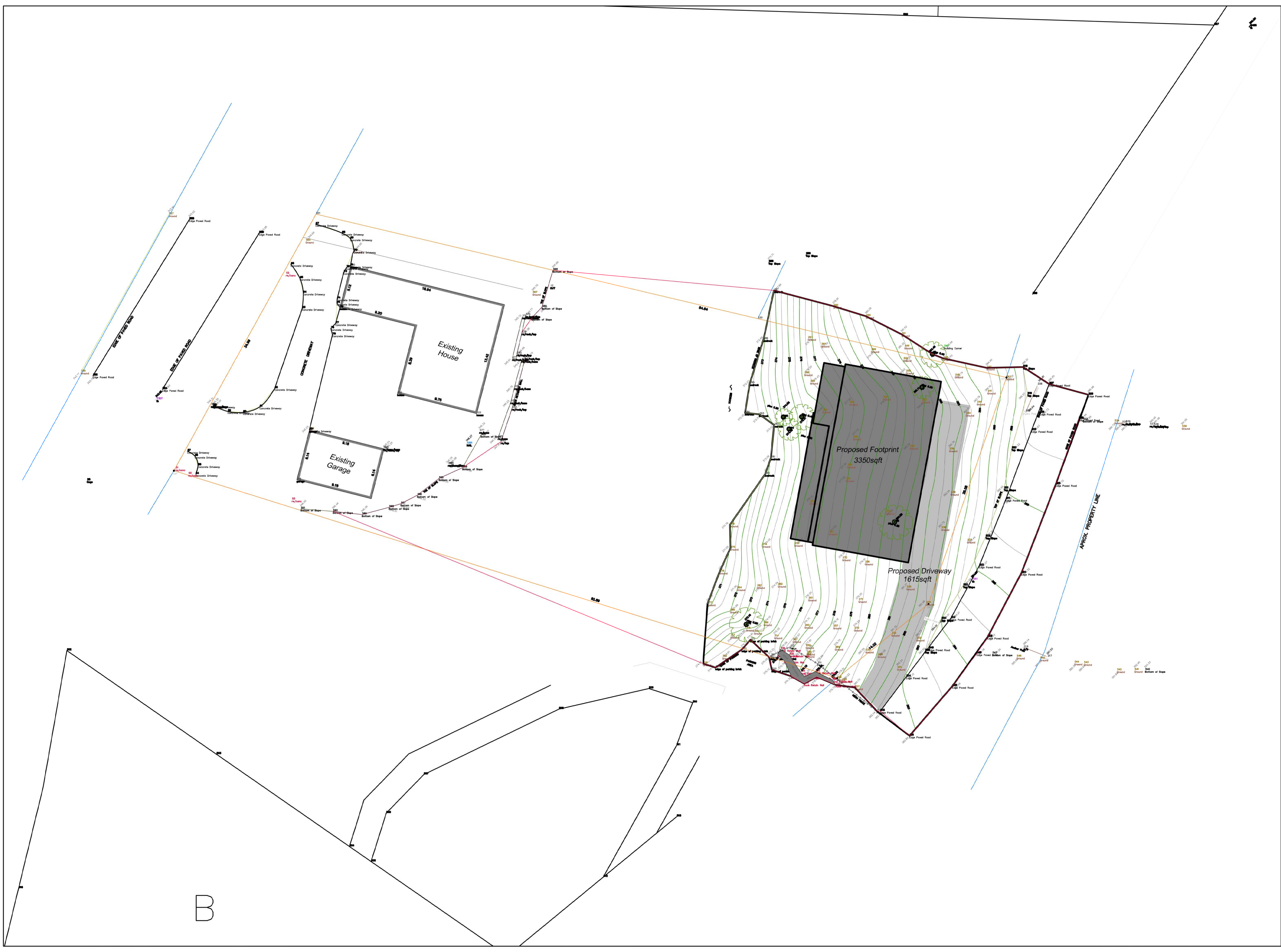
A2

DRAWINGS ARE NOT TO BE SCALED.
 ALL DIMENSIONS SHALL BE VERIFIED ON JOB

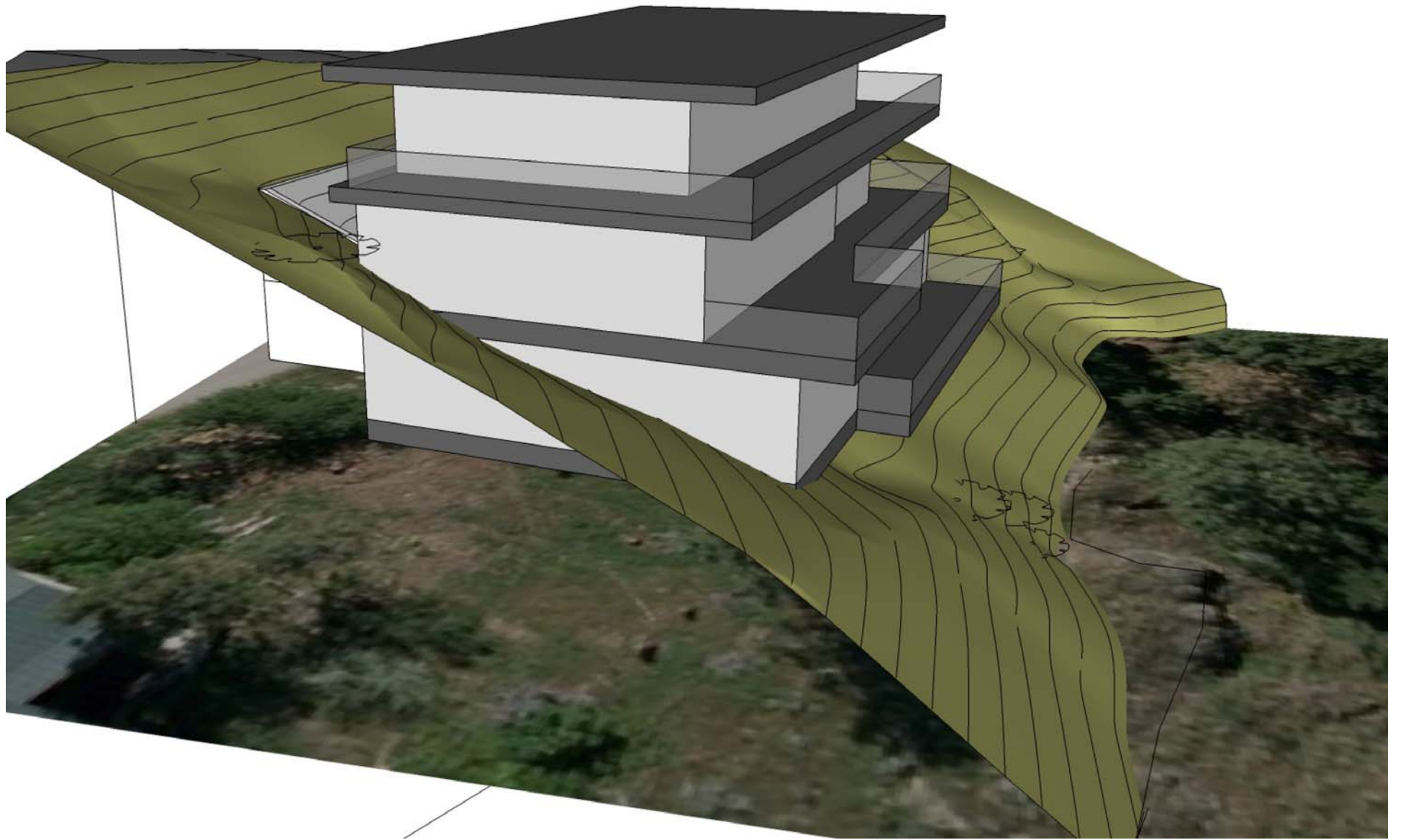
Drawing Title
SITE PLAN

scale: 1/16"=1'0"

| | |
|---------|-------------|
| Date | |
| Job No. | m+m 15-1504 |
| Scale | AS SHOWN |
| Drawn | X.X.X. |
| Checked | |



B



The Zoning Analysis Table applies to all Rezoning and Development Permit applications for:

- ▶ Character Neighbourhood Permit
- ▶ Heritage Alteration Permit
- ▶ Carriage House/Two Dwelling Housing Permit
- ▶ Development Variance Permit
- ▶ Multi-unit Residential Permit (3+ units)
- ▶ Commercial Permit
- ▶ Industrial Permit
- ▶ Institutional Permit

This analysis table provides the applicant an opportunity to demonstrate how the proposal meets the regulations of the Zoning Bylaw 8000. Please refer to the Zoning Bylaw 8000 online at kelowna.ca/bylaws.

ALL MEASUREMENTS TO BE PROVIDED IN METRIC.

| Site Details: | Zone Requirement | Proposal |
|--|------------------|----------|
| Site Area (m ²) | | |
| Site Width (m) | | |
| Site Depth (m) | | |
| Site Coverage of Building(s) (%) | | |
| Site Coverage of buildings, driveways, and parking (%) | | |

| Development Regulations: | Zone Requirement | Proposal |
|---|------------------|----------|
| Total Number & Types of units | | |
| Floor Area (gross/net) | | |
| Floor Area Ratio (FAR) | | |
| Building Height (stories/meters) | | |
| Building(s) Setbacks (m): | | |
| Front | | |
| Side (include direction) | | |
| Side (include direction) | | |
| Rear | | |
| Number of Parking Stalls/Loading Spaces | | |
| Setbacks to Parking (m): | | |
| Front | | |
| Side (include direction) | | |
| Side (include direction) | | |
| Rear | | |
| Drive Aisle Width (m) | | |
| Number of Bicycle Parking Spaces | | |
| Private Open Space Area | | |

**- INTERIOR -
TESTING SERVICES
- LTD. -**

MATERIALS TESTING • SOILS
CONCRETE • ASPHALT • CORING
GEOTECHNICAL ENGINEERING

1 - 1925 KIRSCHNER ROAD
KELOWNA, B.C. V1Y 4N7
PHONE: 860-6540
FAX: 860-5027

Mr Fred Hamel
c/o Kent-Macpherson
Suite 304 – 1708 Dolphin Avenue
Kelowna, BC V1Y 9S4

June 28, 2017
Job 13.176

Attention: Mr Jordan Hettinga, B.Sc, RI

Dear Sir;

Re: **Additional Geotechnical Comments – Proposed House
405 Poplar Point Drive
Kelowna, BC**

As requested, Interior Testing Services Ltd (ITSL) provides the following preliminary comments with respect to foundation design and preparation for the above noted proposed home. Please see attached a one page site plan complete with slope cross-sections (prepared by others). In addition, we also attach copy of our two-page "Terms of Engagement" that applies to our work on this project, previously accepted and signed.

1.0 INTRODUCTION & SCOPE OF WORK

ITSL has previously provided a geotechnical review of the property, outlined in our report dated December 4, 2013.

Since then, we now understand that you intend to apply for a re-zoning of the above noted property in order to allow for construction of a second dwelling, which would parallel Herbert Heights road. We have been forwarded a site plan showing existing features and slope cross-sections (attached) as well as conceptual drawings showing the proposed home.

At this stage, we understand that you are considering connecting the proposed foundations to competent bedrock, which we noted as being the preferable foundation preparation option in our prior report. From a geotechnical perspective this appears reasonable. The intent of this letter is to provide preliminary comments and recommendations for foundation design and preparation.

2.0 DESIGN CONCEPTS & RECOMMENDATIONS

The prime consideration for foundation design for the proposed home is slope stability. For typical footings (strip footings), it is conventional to set foundations below a 2H:1V (26.5 degrees) line projected up from the toe of the downhill slopes. This line can also be projected up from the crest of downhill bedrock outcrops where they exist. This convention appears to be feasible for the very northeast section of the property (see attached cross-sections). However, toward the southeast area of the site, based on the provided slope cross-sections, ordinary foundations do not appear to be practical for house support, given the depth required to achieve the 2H:1V setback (see attached cross-sections).

To provide the necessary support for the proposed structure, our prior report noted that it would be preferable to connect the proposed foundations to competent bedrock. The intent of the structural connection to the bedrock is to provide adequate support to the foundations and to limit the load to the slope. By limiting the load to the slope, the driving force of a potential slide is reduced and an increased factor of safety is achieved, as compared to supporting the foundations directly on the slope.

As a preliminary comment, the proposed micro piles should be socketed into competent bedrock. Based on our experience in this area, the depth to competent bedrock will vary across the site. As outlined in our prior report, a deeper geotechnical investigation is recommended to identify the depth to the bedrock and to provide additional design guidance.

3.0 ADDITIONAL GENERAL COMMENTS

In our prior report, we recommended limiting the disturbance to the existing slopes. This would typically include not removing vegetation, which provides stability to the slope, and not imposing new significant loads to the slope crest. By adding grading fills, structures etc to the slope crest, the driving force of a potential slide is increased and the factor of safety against slope movement would be decreased.

We understand that it is intended to capture all site drainage water and direct it to the local storm system. From a geotechnical perspective this is reasonable. Water infiltration can reduce the factor of safety of a slope by decreasing the friction angle of otherwise dry soils. All water (driveway, house etc) should be directed in solid piping to the storm system or another suitable location downhill and away from the slope.

4.0 CONCLUSIONS

As outlined in our December 4, 2013 report, we understand that the City has adopted a 2% probability in a 50 year period as the required level of safety with respect to geotechnical hazards for developments. Provided that the proposed home is satisfactorily pinned to competent bedrock, by micro piles or similar, and that all drainage water is collected and directed offsite, it appears reasonable, in our opinion, to conclude that the above described home location, is suitable for the intended residential development and the geotechnical risk appears to be within the level of safety currently accepted by the governing authority. Please see the comments in our prior report dated December 4, 2013 for additional comments and recommendations for site development. We also recommend additional site investigations in order to provide further design comments.

While it appears reasonable to come to the opinion we have provided above with respect to 2% probability in a 50 year period, ITSL notes that the occurrence of a hazard event is always a possibility and cannot be construed as an error or omission on the part of ITSL or the City.

We trust the above comments are sufficient at this stage. After your review, please feel free to call and discuss if you have any questions.

Sincerely,
Interior Testing Services Ltd

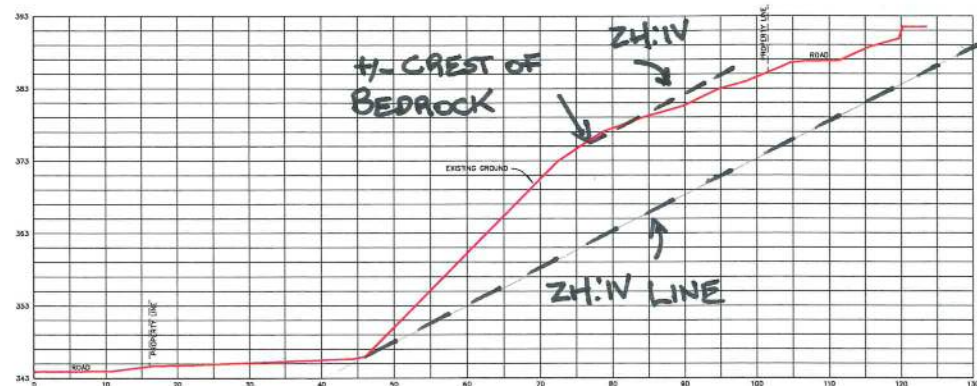
Prepared By:

 A circular professional engineer seal for the Province of Ontario. The seal contains the text: "PROFESSIONAL ENGINEER", "PROVINCE OF ONTARIO", "J. BLOCK", "# 39007", and "BRITISH COLUMBIA". The seal is stamped in blue ink and has a signature over it. To the right of the seal, the date "JUNE 28/17" is handwritten in blue ink.
Jeremy Block, P. Eng
Intermediate Geotechnical Engineer

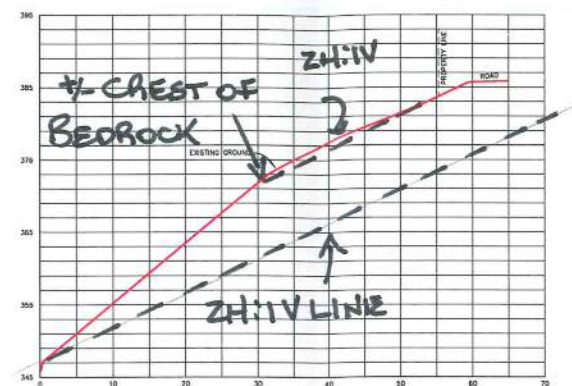
Reviewed By:

 A circular professional engineer seal for the Province of Ontario. The seal contains the text: "PROFESSIONAL ENGINEER", "PROVINCE OF ONTARIO", "P. HANENBURG", "# 28282", and "BRITISH COLUMBIA". The seal is stamped in blue ink and has a signature over it.
Peter Hanenburg, P. Eng
Principal Geotechnical Engineer

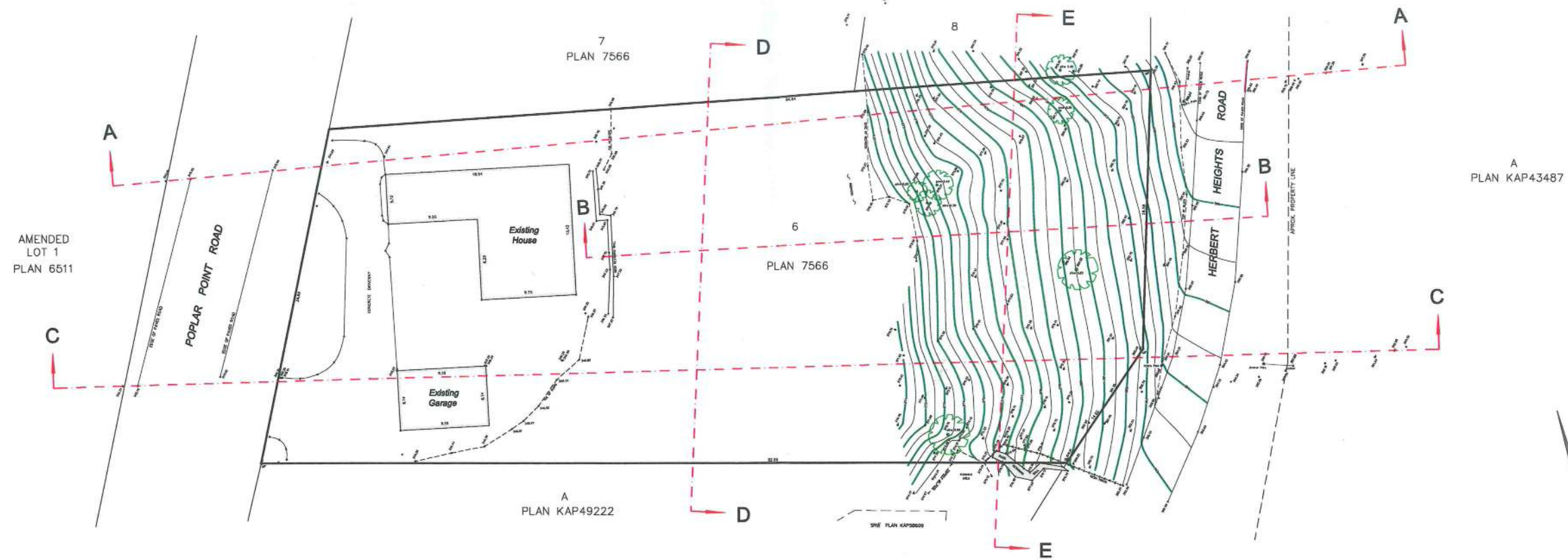
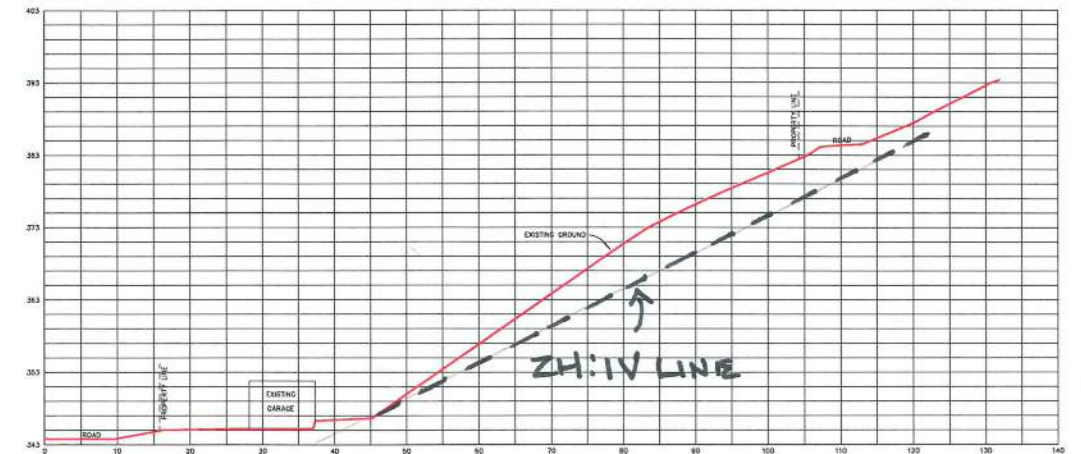
PROFILE A - A (SCALE 1:500)



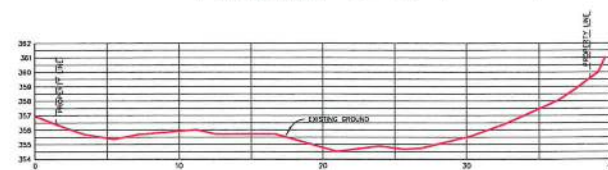
PROFILE B - B (SCALE 1:500)



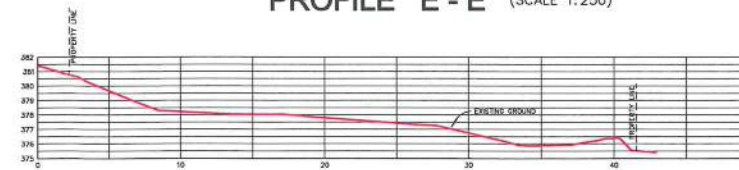
PROFILE C - C (SCALE 1:500)



PROFILE D - D (SCALE 1:250)



PROFILE E - E (SCALE 1:250)



LEGEND:
Elevations are Geodetic and are derived from Control Monument #75H2443 Elev. = 389.361)
Contour interval = 0.5m

TITLE:

SITE PLAN AND CROSS SECTIONS OF PART OF LOT 6,
DISTRICT LOT 219. O.D.Y.D., PLAN 7566

DRAWN BY: **RUNNALLS DENBY**
british columbia land surveyors
259A Lawrence Avenue Kelowna, B.C. V1Y 6L2
Phone: (250)763-7322 Fax: (250)763-4413
Email: nell@runnallsdenby.com

| | |
|----------|-----------------|
| SCALE: | 1:250 (22"x34") |
| DATE: | NOV. 20, 2013 |
| DWG: | 13917 SITE 2 |
| FILE No: | 13917 |
| REV: | 0 |

CLIENT: **FREDCO HOLDINGS**

TERMS OF ENGAGEMENT

GENERAL

Interior Testing Services Ltd. (ITSL) shall render the Services performed for the Client on this Project in accordance with the following Terms of Engagement. ITSL may, at its discretion and at any stage, engage subconsultants to perform all or any part of the Services. Unless specifically agreed in writing, these Terms of Engagement shall constitute the entire Contract between ITSL and the Client.

COMPENSATION

Charges for the Services rendered will be made in accordance with ITSL's Schedule of Fees and Disbursements in effect from time to time as the Services are rendered. All Charges will be payable in Canadian Dollars. Invoices will be due and payable by the Client within thirty (30) days of the date of the invoice without hold back. Interest on overdue accounts is 12% per annum.

REPRESENTATIVES

Each party shall designate a representative who is authorized to act on behalf of that party and receive notices under this Agreement.

TERMINATION

Either party may terminate this engagement without cause upon thirty (30) days' notice in writing. On termination by either party under this paragraph, the Client shall forthwith pay ITSL its Charges for the Services performed, including all expenses and other charges incurred by ITSL for this Project.

If either party breaches this engagement, the non-defaulting party may terminate this engagement after giving seven (7) days' notice to remedy the breach. On termination by ITSL under this paragraph, the Client shall forthwith pay to ITSL its Charges for the Services performed to the date of termination, including all fees and charges for this Project.

ENVIRONMENTAL

ITSL's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of soil or pollution of groundwater. ITSL will co-operate with the Client's environmental consultant during the field work phase of the investigation.

PROFESSIONAL RESPONSIBILITY

In performing the Services, ITSL will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures normally provided in the performance of the Services contemplated in this engagement at the time when and the location in which the Services were performed. ITSL makes no warranty, representation or guarantee, either express or implied as to the professional services rendered under this agreement.

LIMITATION OF LIABILITY

ITSL shall not be responsible for:

- (a) the failure of a contractor, retained by the Client, to perform the work required in the Project in accordance with the applicable contract documents;
- (b) the design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
- (c) any cross-contamination resulting from subsurface investigations;
- (d) any damage to subsurface structures and utilities;
- (e) any Project decisions made by the Client if the decisions were made without the advice of ITSL or contrary to or inconsistent with ITSL's advice;
- (f) any consequential loss, injury or damages suffered by the Client, including but not limited to loss of use, earnings and business interruption;
- (g) the unauthorized distribution of any confidential document or report prepared by or on behalf of ITSL for the exclusive use of the Client.

The total amount of all claims the Client may have against ITSL under this engagement, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited to the lesser of our fees or \$50,000.00.

No claim may be brought against ITSL in contract or tort more than two (2) years after the Services were completed or terminated under this engagement.

PERSONAL LIABILITY

For the purposes of the limitation of liability provisions contained in the Agreement of the parties herein, the Client expressly agrees that it has entered into this Agreement with ITSL, both on its own behalf and as agent on behalf of its employees and principals.

The Client expressly agrees that ITSL’s employees and principals shall have no personal liability to the Client in respect of a claim, whether in contract, tort and/or any other cause of action in law. Accordingly, the Client expressly agrees that it will bring no proceedings and take no action in any court of law against any of ITSL’s employees or principals in their personal capacity.

THIRD PARTY LIABILITY

This report was prepared by ITSL for the account of the Client. The material in it reflects the judgement and opinion of ITSL in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ITSL accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This report may not be used or relied upon by any other person unless that person is specifically named by us as a beneficiary of the Report. The Client agrees to maintain the confidentiality of the Report and reasonably protect the report from distribution to any other person.

INDEMNITY

The client shall indemnify and hold harmless ITSL from and against any costs, damages, expenses, legal fees and disbursements, expert and investigation costs, claims, liabilities, actions, causes of action and any taxes thereon arising from or related to any claim or threatened claim by any party arising from or related to the performance of the Services.

DOCUMENTS

All of the documents prepared by ITSL or on behalf of ITSL in connection with the Project are instruments of service for the execution of the Project. ITSL retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used on any other project without the prior written agreement of ITSL.

FIELD SERVICES

Where applicable, field services recommended for the Project are the minimum necessary, in the sole discretion of ITSL, to observe whether the work of a contractor retained by the Client is being carried out in general conformity with the intent of the Services.

DISPUTE RESOLUTION

If requested in writing by either the Client or ITSL, the Client and ITSL shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, the dispute shall be referred to and finally resolved by an arbitrator appointed by agreement of the parties.

CONFIRMATION OF PROFESSIONAL LIABILITY INSURANCE

As required by by-laws of the Association of Professional Engineers and Geoscientists of British Columbia, it is required that our firm advises whether or not Professional Liability Insurance is held. It is also required that a space for you to acknowledge this information be provided.

Our professional liability insurance is not project specific for the project and should not be regarded as such. If you require insurance for your project you should purchase a project specific insurance policy directly.

Accordingly, this notice serves to advise you that ITSL carries professional liability insurance. Please sign and return a copy of this form as an indication of acceptance and agreement to the contractual force of these Terms of Engagement.

ACKNOWLEDGEMENT: _____