SUBDIVISION AND DEVELOPMENT APPEAL BOARD
FOR ROCKY VIEW COUNTY

File:	1 - PRDP20240118 Bird
Appellant(s)	Richard and Cathryn Bird
Applicant(s)	Dean Thomas Design Group (Ryland Cook)
Owner(s)	John & Claudine Lang-Hodge

Exhibit	Description	Pages
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NOTICE OF APPEAL

Subdivision & Development Appeal Board for Rocky View County

Enforcement Appeal Committee for Rocky View County

APPELLANT INFORMATION

Name of Appellant			
Bird, Richard & Cathryn			
Appellant Property Address	**Municipality**	**Province**	**Postal Code**
7 Clear Mountain Rise SW	Rocky View County	AB	T3Z 3J9
Mailing Address (if different than above)	**Municipality**	**Province**	**Postal Code**
Primary Phone #	**Alternate Phone #**	**Email Address**	
[redacted]	[redacted]	[redacted]	

PROPERTY UNDER APPEAL

Address	Legal Land Description (Lot, Block, Plan OR Quarter-Section-Township-Range-Meridian)
242253 Westbluff Road	Lot 4, Block 2, Plan 1512150, NE-18-24-03-05
Property Roll #	**Development Permit, Subdivision Application, or Enforcement Order #**
04618044	Application Number: PRDP20240118

I AM APPEALING THE DECISION ISSUED BY

☑ Development Authority ☐ Subdivision Authority ☐ Enforcement Services

REASONS FOR APPEAL (include as much detail as possible as to why you are appealing the decision, attach a separate page if required)

We are the owners of three lots on Clear Mountain Rise which are situated down slope, below the proposed development, including our primary residence. The proposed development includes regrading, excavation and placement of clean fill. We object to any such development if it modifies the existing natural elevation of the lot, its height relative to adjacent lots, the natural contours of the land or existing drainage patterns. Any such modifications would detract from the natural rural setting of our neighborhood, impair the natural beauty of the existing skyline above our properties, and adversely impact the value of our property. The development would also include relaxation to the minimum top-of-bank setback, which we would strongly object to. The setback exists to prevent hill top homes from looming over those below and there is no justification for such a relaxation, which would significantly adversely impact our properties.

ROCKY VIEW COUNTY RECEIVED MAR 13 2024 LEGISLATIVE AND INTERGOVERNMENTAL SERVICES

This information is collected under section 33(c) of the *Freedom of Information and Protection of Privacy Act* (*FOIP Act*) for the Subdivision and Development Appeal Board or the Enforcement Appeal Committee for Rocky View County and will be used to process your appeal and create a public record of the appeal hearing. Your name, legal land description, street address, and reasons for appeal will be made available to the public in accordance with section 40(1)(c) of the *FOIP Act*. Your personal contact information, including your phone number and email address, may be redacted prior to your appeal being made available to the public. If you have questions regarding the collection, use or disclosure of this information, please contact a Legislative Officer at 403-230-1401.

7 Clear Mountain Rise SW
Calgary, AB T3Z 3J9

March 7, 2024

Board Clerk
c/o Legislative & Intergovernmental Services
262075 Rocky View Point
Rocky View County
AB T4A 0X2

Dear Sir:

Please find enclosed our Notice of Appeal to the approval of a development permit, Application Number PRDP20240118, of which we were just advised, together with the requisite cheque for $250. The reasons for our appeal of and objection to this development are set out in the Notice form but essentially involve the anticipated adverse impacts to the natural rural character of our neighbourhood, to the natural beauty of the existing skyline, and to the value of our down slope home and properties, especially as a result of relaxing the minimum top-of-bank setback.

Yours truly,

J. Richard Bird

SUBDIVISION AND DEVELOPMENT APPEAL BOARD FOR ROCKY VIEW COUNTY

262075 Rocky View Point
Rocky View County, Alberta T4A 0X2
403-230-1401 | sdab@rockyview.ca

NOTICE OF HEARING

Issued: March 18, 2024

An appeal has been filed with the Subdivision and Development Appeal Board for Rocky View County ("Board") against the Development Authority's decision to conditionally-approve a development permit application for the single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

INFORMATION ABOUT THE PROPERTY UNDER APPEAL	
File:	04618044; PRDP20240118
Location:	242253 Westbluff Road located approximately 1.61 km (1 mile) south of Springbank Road and on the west side of Westbluff Road
Appellant(s):	Richard and Cathryn Bird
Applicant(s):	Dean Thomas Design Group (Ryland Cook)
Owner(s):	John & Claudine Lang-Hodge

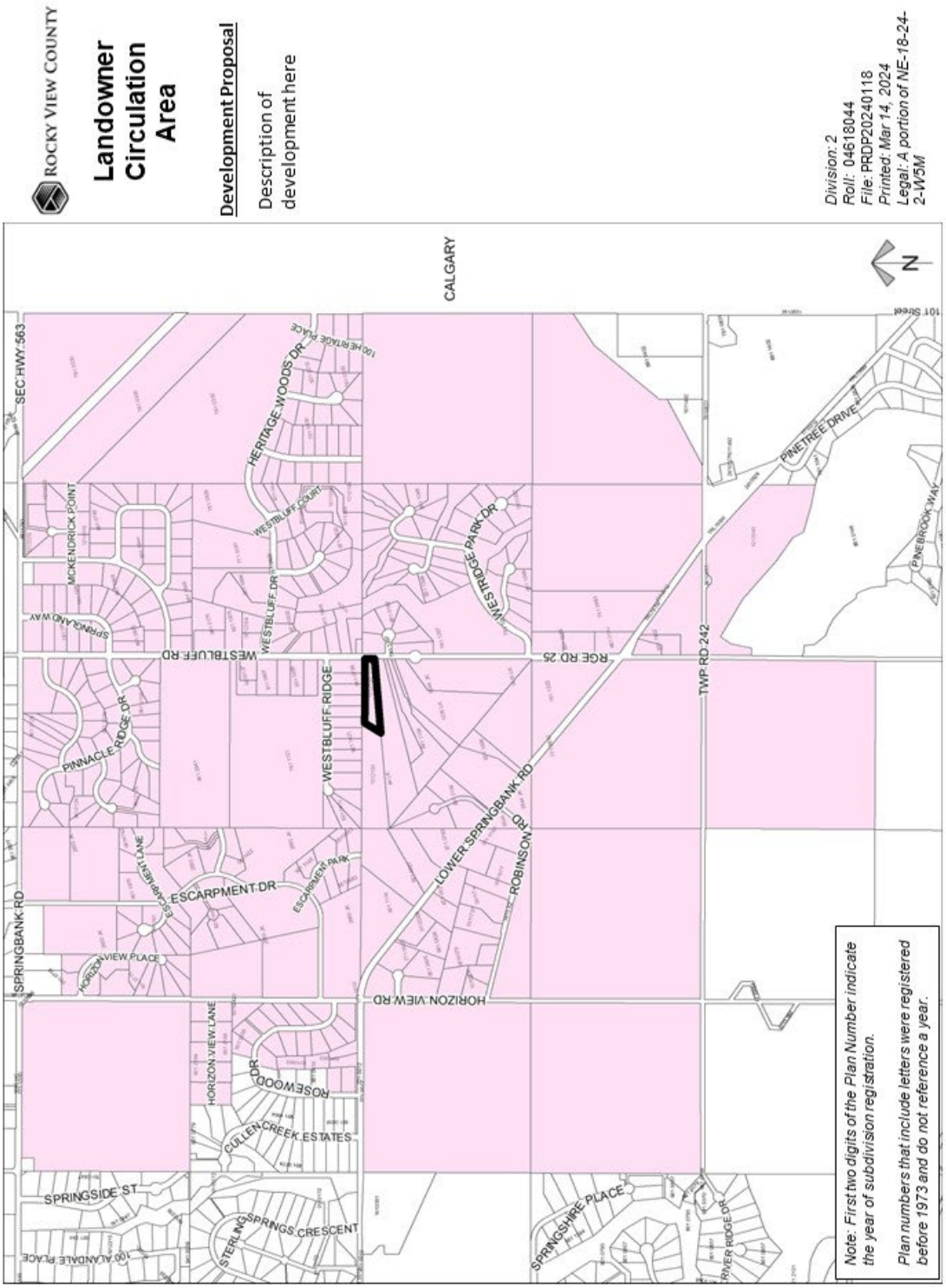
APPEAL HEARING INFORMATION *Further information about the appeal will be available in the Board's agenda six days before the hearing on www.rockyview.ca.*	
Date and time:	March 28, 2024 at or after 9:00 a.m.
Location:	Council Chambers - County Hall 262075 Rocky View Point, Rocky View County, Alberta T4A 0X2

HOW TO PARTICIPATE IN THE HEARING *If you feel you are affected by this appeal, you can provide a submission or present at the hearing as noted below.*	
Before the hearing:	In your submission, clearly state how you are affected and include where you live in relation to the property under appeal. Submissions are due by 9:00 a.m. the last business day before the hearing. It is at the Board's discretion whether late submissions are accepted. Submissions can be provided by: • email to sdab@rockyview.ca; or • mail to the SDAB Clerk at 262075 Rocky View Point, Rocky View County, Alberta T4A 0X2
At the hearing:	Add your name to the sign-in sheet to present to the Board at the hearing

If you have questions about the development permit application, contact Planning Services at development@rockyview.ca. For inquiries about the hearing procedure, contact the Board clerk at sdab@rockyview.ca.

SITE MAP

LEGEND
Bolded: property under appeal
Shaded: notification area



Submissions may be made available to the public on www.rockyview.ca in accordance with section 40(1)(c) of the *Freedom of Information and Protection of Privacy Act* ('*FOIP Act*'). Personal information contained in your submission is collected under section 33(c) of the *FOIP Act* for the purpose of public participation in the Board's decision-making process. Your name, legal land description, street address, and any opinions provided in your submission will be made available to the public and form part of the public record. Your personal contact information, including your phone number and email address, may be redacted prior to making your submission available to the public. If you have questions regarding the collection, use or disclosure of this information, please contact a Legislative Officer at 403-230-1401.

ROCKY VIEW COUNTY

PLANNING

TO:	Subdivision and Development Appeal Board		
DATE:	March 28, 2024	**DIVISION:**	2
Roll #:	04618044	**APPLICATION:**	PRDP20240118
SUBJECT:	Development Item – Single-lot Regrading, Excavation, and Placement of Clean Fill, with Variances		

PROPOSAL: Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement

LOCATION: Located approximately 1.61 kilometres (1.00 mile) south of Springbank Road and on the west side of Westbluff Road.

DECISION: Approval

DECISION DATE:	**APPEAL DATE:**	**ADVERTISED DATE:**
March 5, 2024	March 13, 2024	March 5, 2024

APPEAL:

Submitted by an adjacent landowner with respect to concerns surrounding building height, visual impacts, property values, and the natural physical landscape of the subject parcel and the neighbourhood.

'See attached exhibits'

ANALYSIS:

The application is for single-lot regrading, excavation, and placement of clean fill, to accommodate the construction of a new Dwelling, Single Detached along with other associated site improvements.

Dwelling, Single Detached is listed as a permitted use under the Residential, Rural District, and is exempt from requiring a Development Permit as per Section 92 J) of *Land Use Bylaw C-8000-2020* (LUB), unless relaxations are requested. The relaxation to the top-of-bank setback requirement, and the additional single-lot regrading, excavation, and placement of fill beyond the allowable parameters of Section 92 v) of the LUB, are seen as essential to the construction of the dwelling. Subsequent technical reports shall be required as prior-to-release conditions to demonstrate the suitability of the proposed development.

Due to the thorough review process undertaken to conditionally approve the application, and the required technical reports which will be required prior to release of the development permit, it is Administration's position that the proposed development would not unduly interfere with the amenities of the neighbourhood, or materially interfere with or affect the use, enjoyment, or value of neighbouring parcels of land.

Respectfully submitted,

Justin Rebello

Supervisor
Planning and Development Services

JW/llt

ROCKY VIEW COUNTY

PLANNING

TO: Subdivision and Development Appeal Board

DATE: March 28, 2024 **DIVISION:** 2

Roll #: 04618044 **APPLICATION:** PRDP20240118

SUBJECT: Staff Report – Single-lot Regrading, Excavation, and Placement of Clean Fill, with Variances

EXECUTIVE SUMMARY:

The application is for Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

The proposed regrading, excavation, and placement of clean fill is to accommodate the foundation of the dwelling. Due to the topography of the subject parcel in combination with the selected location of the proposed dwelling, the application is requesting a relaxation to the minimum top-of-bank setback requirement. The relaxations are deemed as necessary to accommodate the construction of the proposed dwelling. The Applicant/Owner chose the location of the proposed dwelling to effectively manage stormwater drainage given the size of the home. The dwelling meets all minimum setback requirements and maximum building height requirements of the Residential, Rural District.

The proposed development meets the definition of a Dwelling, Single Detached and is a listed use under the Residential, Rural District. Due to the thorough review process undertaken to conditionally approve the application, and the required technical reports which will be required prior to release of the development permit, it is Administration's position that the proposed development would not unduly interfere with the amenities of the neighbourhood, or materially interfere with or affect the use, enjoyment, or value of neighbouring parcels of land.

ADMINISTRATION DECISION:

Approval, subject to conditions.

OVERVIEW:

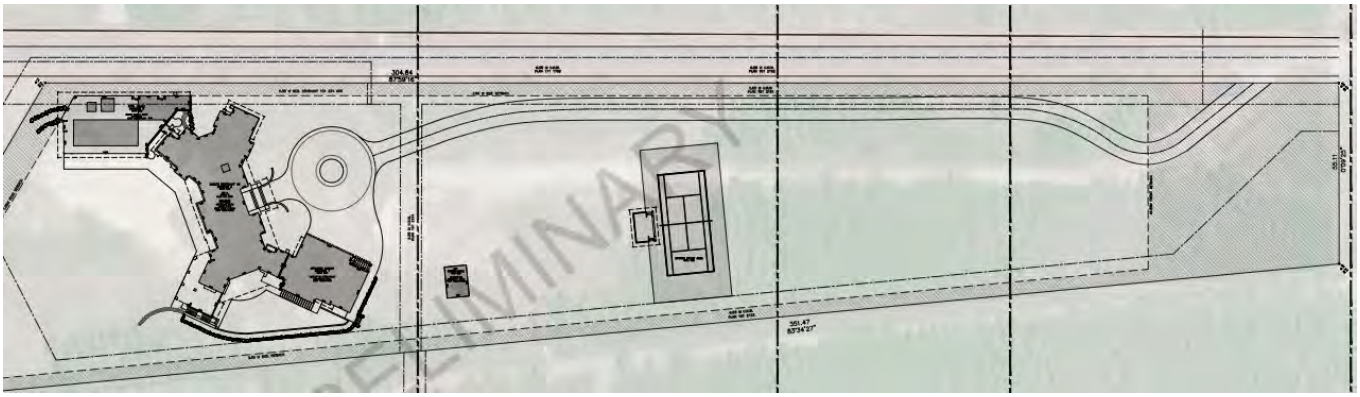
Applicant	Dean Thomas Design Group (Ryland Cook)
Landowner	Lang-Hodge, John & Claudine
Subject Site(s)	242253 WESTBLUFF ROAD
Site Area	1.90 hectares (4.69 acres)
Proposal	Single-lot regrading, excavation, and placement of clean fill, with variance to minimum top-of-bank setback requirement
Surrounding Uses	Residential
Applicable Regulations	*Land Use Bylaw C-8000-2020, Municipal Development Plan, Central Springbank Area Structure Plan, County Servicing Standards*

Administration Resources
Jeevan Wareh, Planning and Development

ROCKY VIEW COUNTY

Figure 1 – Site Location (Regional Context)

Figure 2 – Site Plan (Intended Use Areas)



POLICY/LAND USE BYLAW REVIEW:

Central Springbank Area Structure Plan (ASP):

As per Map 2 – Current Land Use of the ASP, subject parcel is located within the *Residential Use* area.

As per Map 11 – Infill Residential, subject parcel is located with the *Conceptual Plan Boundary*.

2.3) Physical Development Guidelines

- As the submitted application has taken site-specific conditions into consideration, and the design and appearance of the proposed dwelling appear cohesive with adjacent dwellings, it is Administration's position that the subject application is consistent with the Physical Development Guidelines of the ASP.

ROCKY VIEW COUNTY

2.8) Utilities

- Potable water is to be provided via the local water co-op, and wastewater is to be serviced via an on-site Private Sewage Treatment System (PSTS). Should potable water capacity not be available via the water co-op, potable water is to be provided via a groundwater well. Therefore, it is in the opinion of Administration that the subject application is consistent with the Utilities Policies of the ASP.

2.9) Residential Development

- Subject application is for a Dwelling, Single Detached, does not pose a negative visual impact on adjacent lands, does not obstruct existing viewsheds, and takes into account the natural topography into consideration. Therefore, it is Administration's position that the subject application is consistent with the Residential Development Policies of the ASP.

Municipal Development Plan (MDP):

Country Residential Communities.

10.1) Development within Greater Bragg Creek, Bearspaw, North and Central Springbank, Elbow Valley, Balzac East (Sharp Hills/Butte Hills), Cochrane North, and Glenbow Ranch shall conform to their relevant area structure plan.

- Subject application is consistent with the Policies of the Central Springbank ASP, therefore the proposal is consistent with Section 10.1 of the MDP.

Land Use Bylaw C-8000-2020 (LUB):

"Dwelling, Single Detached" means a dwelling which is supported on a permanent foundation or basement and has a minimum GFA of 37.10 sq. m (399.34 sq. ft.).

- Subject dwelling is to be constructed on a basement foundation and shall meet the minimum GFA of 37.10 *sq. m (399.34 sq. ft.).*

R-RUR Residential, Rural District

317) PURPOSE: To provide for residential uses in a rural setting on parcels which can accommodate limited agricultural pursuits.

318) PERMITTED USES: Dwelling, Single Detached

320) MAXIMUM DENSITY:

a) A maximum of two Dwelling Units – one Dwelling, Single Detached and one other Dwelling Unit where the other Dwelling Unit is not a Dwelling, Single Detached.

- Subject dwelling meets the definition of Dwelling, Single Detached and shall serve as the principal dwelling on the subject parcel. The proposed dwelling does not contain an Accessory Dwelling Unit (secondary suite). No concerns in respect to maximum density.

321) MAXIMUM BUILDING HEIGHT:

b) All others: 12.0 m (39.37 ft.)

- Maximum: 12.00 m (39.37 ft.)
- Proposed (with pool house height included): 10.38 m (34.06 ft.)
- Proposed (without pool house height included): 11.74 m (38.52 ft.)

ROCKY VIEW COUNTY

323) MINIMUM SETBACKS:

- *Front yard setback requirement: 45.00 m (147.64 ft.)*
- **Proposed front yard setback: Lots**
- *Side yard setback requirement (S1): 3.00 m (9.84 ft.)*
- **Proposed side yard setback (S1): 3.02 m (9.91 ft.)**
- *Side yard setback requirement (S2): 3.00 m (9.84 ft.)*
- **Proposed side yard setback (S2): 10.58 m (34.71 ft.)**
- *Rear yard setback requirement: 7.00 m (22.97 ft.)*
- **Proposed rear yard setback: 7.60 m (24.93 ft.)**

DEVELOPMENT PERMITS NOT REQUIRED

92) A Development Permit is not required for the following development, provided it complies with all applicable provisions of the Bylaw, and does not require a variance:

v) Stripping, Grading, Excavation and Fill

The placing of up to 1.00 m (3.28 ft.) of fill and topsoil adjacent to or within 15.00 m (49.21 ft.) of a building under construction that has a valid Building Permit, during the course of the construction to be used to establish approved final grades.

- Proposed placement of fill exceeds above allowable parameters, therefore Development Permit is required.

The excavation up to 2.00 m (6.56 ft.) adjacent to or within 15.00 m (49.21 ft.) of a building under construction that has a valid Building Permit, during the course of the construction to be used to establish approved final grades.

- Proposed excavation exceeds above allowable parameters, therefore Development Permit is required.

Section 190) The Development Authority may, at their discretion, reduce the setback requirements if the applicant provides a Geotechnical Study, prepared by a qualified engineer, that provides satisfactory proof of bank stability.

- Included as prior-to-release condition of approval.

County Servicing Standards:

302) SLOPE STABILITY ASSESSMENT REPORT

The County requires a Slope Stability Assessment by a Geotechnical Engineer, for slopes 15% or greater, and greater than 2.00 meters in vertical height. These areas can be considered as part of the developable acre area if a Geotechnical Engineer can certify the stability of the slopes prior to, during and after development.

- Included as prior-to-release condition of approval.

305) DEEP FILL REPORTS

When the constructed depth of fill exceeds 1.2 meters a "Deep Fill" report is required. The report shall be completed by a Geotechnical Engineer that includes general recommendations for different types of building foundations, as well as include and summarize compaction testing of fill.

ROCKY VIEW COUNTY

Potential fill areas must be identified as part of the development approval application. Following development approval, all deep-fill placements must have a record of compaction testing.

Fill for building foundations must be compacted to a minimum of 98% Standard Proctor Maximum Dry Density (SPMDD). Specifications for fill for roadway subgrades are addressed in Section 400.0. Areas outside of roadways or foundations must be compacted to a minimum of 95% SPMDD.

- Included as prior-to-release condition of approval.

704.2.5) Site-Specific Stormwater Implementation Plan (SSIP)

A SSIP is a drainage and servicing plan that is generally prepared in support of Development Permits or small residential subdivisions of less than 10 lots on a site-specific basis.

- Included as prior-to-release condition of approval.

CONSTRUCTION MANAGEMENT

1101) Stock Piling of Materials and Stripping and Grading

During site preparation and/or construction of roads and buildings, care shall be taken to mitigate potential impact from erosion and sedimentation. Prior to undertaking any site preparation, the developer of the works shall submit to the County a Construction Management Plan.

- Included as prior-to-release condition of approval.

VARIANCE SUMMARY:

Variance	Requirement	Proposed	Percentage (%)
Section 189) Minimum Top-of-Bank setback requirement	20.00 m (65.62 ft.)	Varies: To a maximum of 0.00 m (0.00 ft.)	100%

DISCUSSION:

Based on the size, location, style of home, and context of the subject parcel, the proposed Dwelling, Single Detached requires grading, excavation, and placement of fill greater than the DP-exempt limits allowed in Section 90 v) of the Land Use Bylaw. Due to the topography of the subject parcel in combination with the selected location of the proposed dwelling, the application is requesting a relaxation to the minimum top-of-bank setback requirement. It is also to be noted that the proposed dwelling would be relatively parallel with other adjacent dwellings in the area, therefore form and massing are not of concern given the context of the area.

The applicant provided a Geotechnical Slope Assessment dated 2016 that was conducted on the subject parcel for a previous Development Permit Application that was not pursued by the then-owner of the parcel. Engineering Services reviewed the Assessment and determined that the Applicant/Owner shall submit a Geotechnical Memo confirming whether the Assessment remains applicable to the subject application or not, and if necessary, provide additional recommendations with respect to slope stability.

Based on a desktop review, no environmentally sensitive features were observed on the subject parcel. A joint review was conducted with Building Services who determined that based on the submitted floor plans, the basement of the dwelling does not meet the definition of an Accessory Dwelling Unit (secondary suite), therefore it was not included as part of this approval.

ROCKY VIEW COUNTY

The subject parcel is accessed off a mutual driveway which has an Access Easement Agreement registered on title under Instrument # 151 190 264 and corresponding survey plan # 151 2153. This aspect shall also be addressed via a permanent condition of approval to avoid potential future access issues/disputes.

Potable water is to be provided via piped service from Westridge Water Co-op, as per condition #4 of subdivision file # 2009-RV-061. A letter was provided by the then-applicant's engineer stating that connection infrastructure would be installed. Sewage is to be serviced via a packaged PSTS and enforced via the existing SISA registered on title. Servicing is to be addressed via prior-to-release and permanent conditions of approval.

A site inspection was conducted by the File Manager on March 15, 2024. No immediate issues/concerns were noted. No construction had commenced at the time of inspection. The file manager observed the existing road approach the mutual driveway, and the existing stormwater infrastructure (i.e. culvert). The topography of the land looked to be consistent with the submitted site plan, which illustrated sloping from the east steeply down towards the west. The parcel appears to be well screened from the south via existing mature trees, and adjacent dwellings are constructed relatively parallel to the building site of the proposed dwelling.

Respectfully submitted,

Dominic Kazmierczak

Manager
Planning

Concurrence,

Matthew Boscariol

Executive Director
Community Development Services

ATTACHMENTS:

ATTACHMENT 'A': Development Permit Report Conditions
ATTACHMENT 'B': Application Information

ROCKY VIEW COUNTY

ATTACHMENT 'A': DEVELOPMENT PERMIT REPORT CONDITIONS

Description:

1. That the construction of a Dwelling, Single Detached, may commence on the subject lands, in accordance with the approved site plan and drawings, as prepared by Dean Thomas Design Group, Project Name: 242253 Westbluff RD, Rocky View County, AB, Dwgs: A0.1 – A8.4, dated February 2, 2024, as amended, and conditions of approval including:

    i. Single-lot regrading, excavation, and placement of clean fill for the Dwelling, Single Detached, in accordance with the approved site plan and drawings;

    ii. Single-lot regrading, excavation, and placement of clean fill for the attached pool house and attached garage, in accordance with the approved site plan and drawings;

    iii. Single-lot regrading, excavation, and placement of clean fill for the personal use tennis court, in accordance with the approved site plan and drawings;

    iv. That the minimum top-of-bank setback requirement for the Dwelling, Single Detached, attached pool house and attached garage shall be relaxed ***in accordance with the approved site plan and required technical studies.***

Prior to Release:

2. That prior to release of this permit, the Applicant/Owner shall submit a Geotechnical Memo, prepared by a qualified professional, confirming that the *Geotechnical Slope Assessment* prepared by Parkland Geo, dated August 10, 2016, Project No. CA0241-01 adequately proves bank stability for the proposed Dwelling, Single Detached, in accordance with Section 190 of the County's *Land Use Bylaw C-8000-2020* (LUB) and the County's Servicing Standards. The Geotechnical Memo shall:

    i. Confirm that the Assessment adequately addresses slope stability, sewage disposal, water table levels, construction materials for roads, water servicing, stormwater drainage and any other relevant developmental constraints.

    ii. Provide any additional recommendations for slope stability including registration of any required easements and/or restrictive covenants, if deemed necessary by the Development Authority.

3. That prior to release of this permit, the Applicant/Owner shall submit a Deep Fills Report, prepared by a qualified professional, in accordance with the County's Servicing Standards, for all placed areas of clean fill greater than 1.20 m (3.93 ft.) in depth.

4. That prior to release of this permit, the Applicant/Owner shall submit a limited scope Site-Specific Stormwater Implementation Plan (SSIP) prepared by a qualified professional, in accordance with Springbank Drainage Strategies and the County's Servicing Standards. The SSIP shall include:

    i. A grading plan that illustrates the original ground profile; the depth of proposed fill; the total amount of soil to be imported/exported from the site; and analysis of the pre- and post-construction grades to determine whether there are any impacts to adjacent properties or the public road network.

    ii. Confirmation of pre- and post-construction conditions associated with site stormwater storage, unit area site releases, volume control target, and offsite drainage.

    iii. Recommendations for Erosion and Sediment Control (ESC) mitigation measures.

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5. That prior to release of this permit, the Applicant/Owner shall submit a Construction Management Plan (CMP) addressing noise mitigation measures, traffic accommodation, sedimentation and dust control, erosion and weed control, construction practices, waste management, hazardous material containment and all other relevant construction management details.
6. That prior to release of this permit, the Applicant/Owner shall submit written confirmation of capacity availability from Westridge Water Utilities for piped water services for the subject development, in accordance with the approved subdivision Transmittal of Decision 2009-RV-061, Section 2.8.2 of the *Central Springbank Area Structure Plan*, and the County's Servicing Standards.
    i. That if capacity remains available via Westridge Water Utilities, the subject lands shall connect to the piped water supply with confirmation/documentation provided to the satisfaction of the Development Authority; and
    ii. That if capacity is not available via Westridge Water Utilities, the Applicant/Owner shall propose an acceptable alternative water supply for the subject development, to the satisfaction of the Development Authority.
7. That prior to release of this permit, the Applicant/Owner shall contact County Road Operations with haul details for materials and equipment needed during construction/site development to confirm if Road Use Agreements or permits shall be required for any hauling along the County road system and to confirm the presence of County road ban restrictions.
    i. The Applicant/Owner shall also discuss any requirements or improvements that may be required for the approach of Westbluff Road. If required, a New Road Approach application shall be submitted to County Road Operations
    ii. Written confirmation shall be received from County Road Operations confirming the status of this condition. Any required agreement or permits shall be obtained unless otherwise noted by County Road Operations.

Permanent:

8. That if the prior to release conditions have not been met by **September 30, 2024**, or the approved extension date, then this approval is null and void and the Development Permit shall not be issued.
9. That any plan, technical submission, agreement, matter, or understanding submitted and approved as part of the application, in response to a Prior to Release condition, including the required Geotechnical Report, Deep Fills Report, SSIP, and CMP, shall be implemented, and adhered to in perpetuity and also includes:
    i. The Development Agreement for Site Improvements/Services Agreement (SISA), as registered on title, Instrument No. 151 190 262, as agreed upon between the landowner(s) and Rocky View County.
10. That the Applicant/Owner shall submit compaction testing to the County, verifying that the fill areas greater than 1.20 m. (3.93 ft.) in depth were placed in accordance with the overlying technical accepted by the County.
11. That the dwelling unit shall not be used as a *Vacation Rental* or for commercial purposes at any time, unless approved by a Development Permit.
12. That the pool house and tennis court shall not be used for commercial purposes at any time unless approved by a Development Permit.
13. That this approval does not include an Accessory Dwelling Unit.

ROCKY VIEW COUNTY

14. That there shall be a minimum of two (2) dedicated on-site parking stalls for the subject dwelling unit at all times.
15. That the Applicant/Owner shall take whatever means necessary to prevent visible dust associated with the development from escaping the site and having adverse effects on adjacent roadways and properties.
16. That no topsoil shall be removed from the site. All topsoil shall be retained on-site and shall be re-spread on-site and seeded to grass or landscaped after building construction is complete, as part of site restoration.
17. That access to the subject parcel shall be via the existing mutual approach and driveway, as shown on the approved site plan and drawings.
    i. That the existing Access Easement (Instrument #151 190 264) shall remain registered on title, and shall not be discharged from title, unless an alternative physical and legal access acceptable to the County, has been approved for the subject parcel.
18. That the Applicant/Owner shall be responsible for rectifying any adverse effect on adjacent lands and access/driveway area from drainage alteration, including stormwater implications from the proposed development. Post-development drainage shall not exceed pre-development drainage.
    i. That any lot regrading and placement of clean fill shall not direct any additional overland surface drainage nor negatively impact existing drainage patterns in the County's road right-of-way of Westbluff Road.
19. That all on-site lighting, including private, site security and parking area lighting, shall be designed to conserve energy, reduce glare, and reduce uplight, in accordance with Sections 225 – 227 of the County's *Land Use Bylaw C-8000-2020*. All lighting shall be full cut-off (shielded) and be located and arranged so that no direct rays of light are directed at any adjoining properties, that may interfere with the use and enjoyment of neighbouring lands or interfere with the effectiveness of any traffic control devices or the vision/safety of motorists.
20. That if the development authorized by this Development Permit is not commenced with reasonable diligence within twelve (12) months from the date of issue and completed within twenty-four (24) months of the issue, the permit is deemed to be null and void, unless an extension to this permit shall first have been granted by the Development Officer.

Advisory:

- That the Applicant/Owner shall obtain a Building Permit and any applicable sub-trade permits through the County's Building Services department, prior to any construction taking place, using the appropriate checklists and application forms. Compliance with the *National Energy Code* is also required.
- That the subject development shall conform to the County's *Noise Control Bylaw C-8067-2020* and *Road Use Agreement Bylaw C-8323-2022*, in perpetuity.
- That the site shall remain free of Regulated, Prohibited Noxious or Noxious Weeds and the site shall be maintained in accordance with the *Alberta Weed Control Act [Statutes of Alberta, 2008 Chapter W-5.1, November 16, 2022].*
- That there shall be adequate water & sanitary sewer servicing provided for the subject dwelling unit.

ROCKY VIEW COUNTY

- That it is the Applicant/Owner's responsibility to obtain and display a distinct municipal address in accordance with the County's *Municipal Addressing Bylaw (Bylaw C-7562-2016)*, for the subject dwelling unit, to facilitate accurate emergency response. The municipal address for the subject dwelling unit is *242253 WESTBLUFF ROAD*.
- That during construction, all construction and building materials shall be maintained on-site in a neat and orderly manner. Any debris or garbage shall be stored/placed in garbage bins and disposed of at an approved disposal facility.
- That any other federal, provincial, or County permits, approvals, and/or compliances, are the sole responsibility of the Applicant/Owner.

ROCKY VIEW COUNTY

ATTACHMENT 'B': APPLICATION INFORMATION

APPLICANT: Dean Thomas Design Group (Ryland Cook)	**OWNER:** Lang-Hodge, John & Claudine
DATE APPLICATION RECEIVED: January 1, 2024	**DATE DEEMED COMPLETE:** January 22, 2024
GROSS AREA: 1.90 hectares (4.70 acres)	**LEGAL DESCRIPTION:** Lot 4, Block 2, Plan 1512150; NE-18-24-02-05
APPEAL BOARD: Subdivision and Development Appeal Board	

HISTORY:

August 10, 2017: Development Permit PRDP20164836 issued for the construction of an Accessory Building (was not constructed).

August 9, 2017: Building Permit PRBD20150582 issued for the construction of a Dwelling, Single Detached (was not constructed).

June 20, 2016: Development Permit PRDP20152342 issued for the construction of a Dwelling, Single Detached (was not constructed).

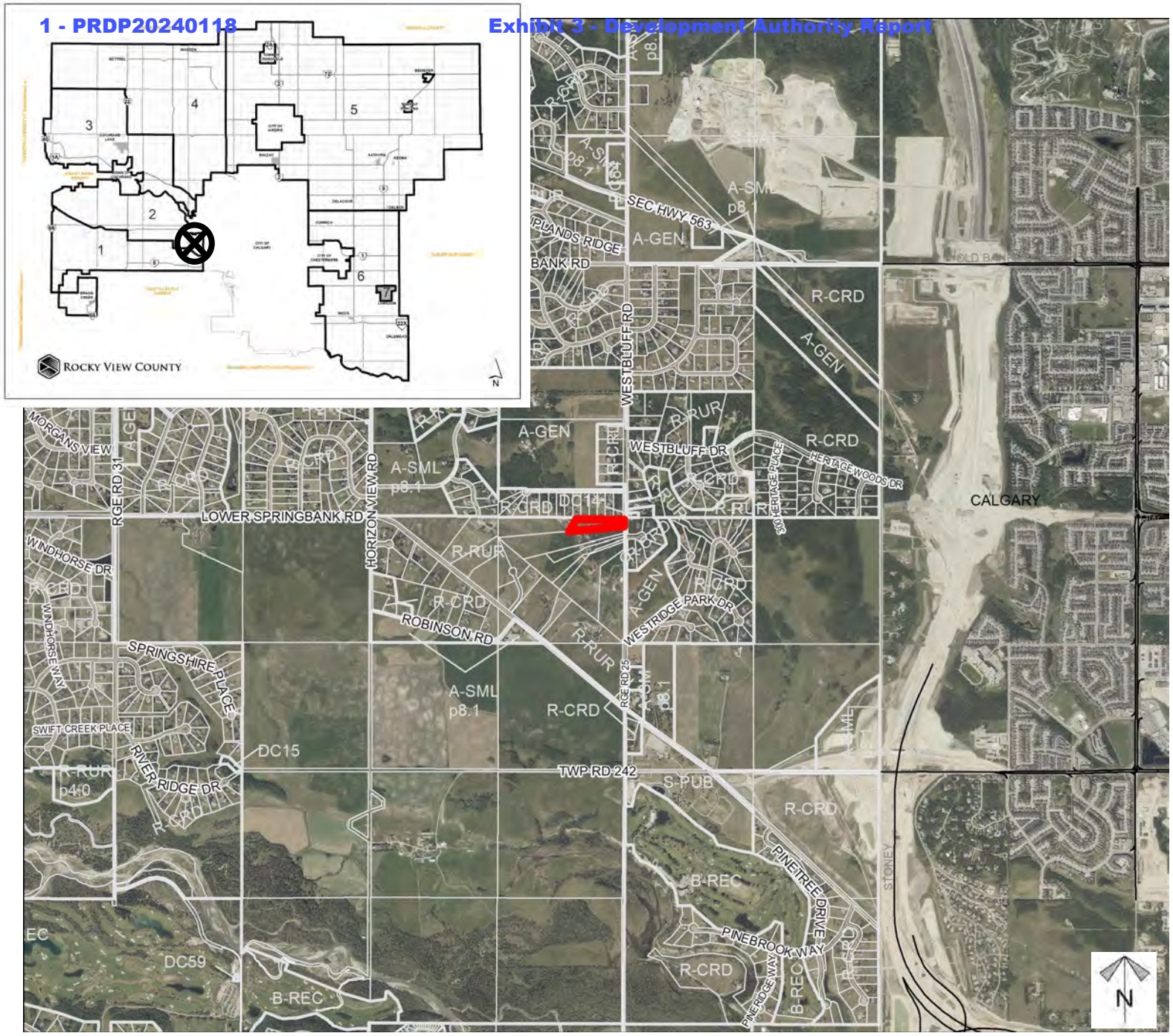
April 28, 2015: Boundary Adjustment Application PL20140166 to adjust the boundaries between a ± 5.70 hectare (14.09 acre) parcel and a ± 1.78 hectare (4.4 acre) parcel in order to create a ± 1.90 hectare (4.70 acre) parcel and a ± 5.58 hectare (13.78 acre) parcel approved by the Subdivision Authority.

July 27, 2010: Subdivision Application 2009-RV-061 to create a +/- 1.78 hectare (+/- 4.41 acre) parcel with a +/- 5.71 hectare (+/- 14.10 acre) remainder approved by the Subdivision Authority.

PUBLIC & AGENCY SUBMISSIONS:

The application was circulated to a number of internal and external agencies and, where appropriate, conditions of approval have been proposed based on these comments.

At the time this report was prepared, no letters of support nor opposition were received from adjacent landowners, excepting the appeal. It is to be noted that one (1) letter of concern in respect to stormwater management was received and has been included in the agenda package for the Board's review.



Location & Context

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

ROCKY VIEW COUNTY

Site Aerial

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

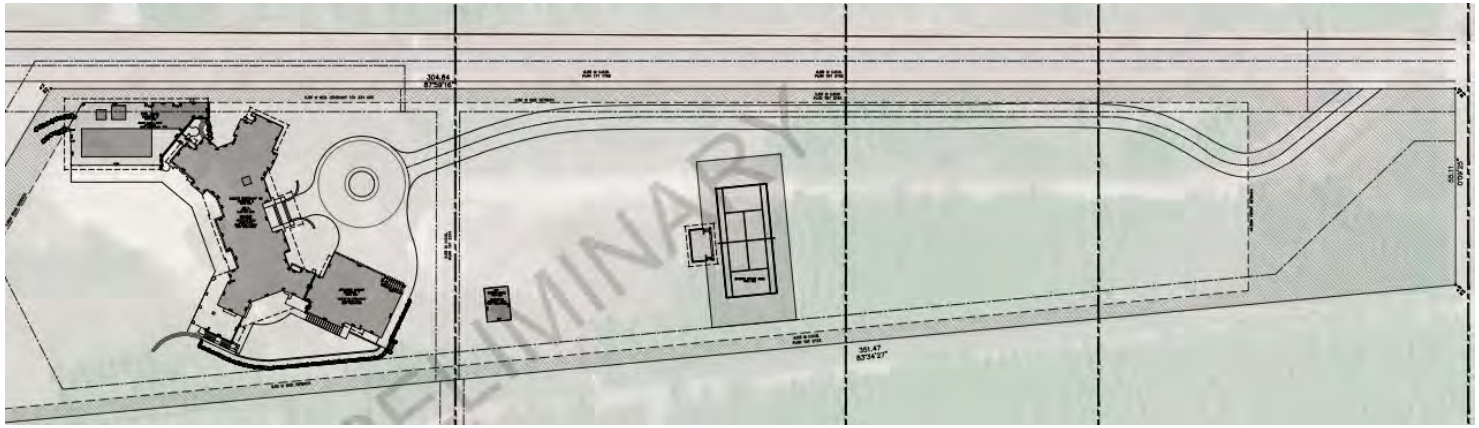
Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

ROCKY VIEW COUNTY

Site Plan

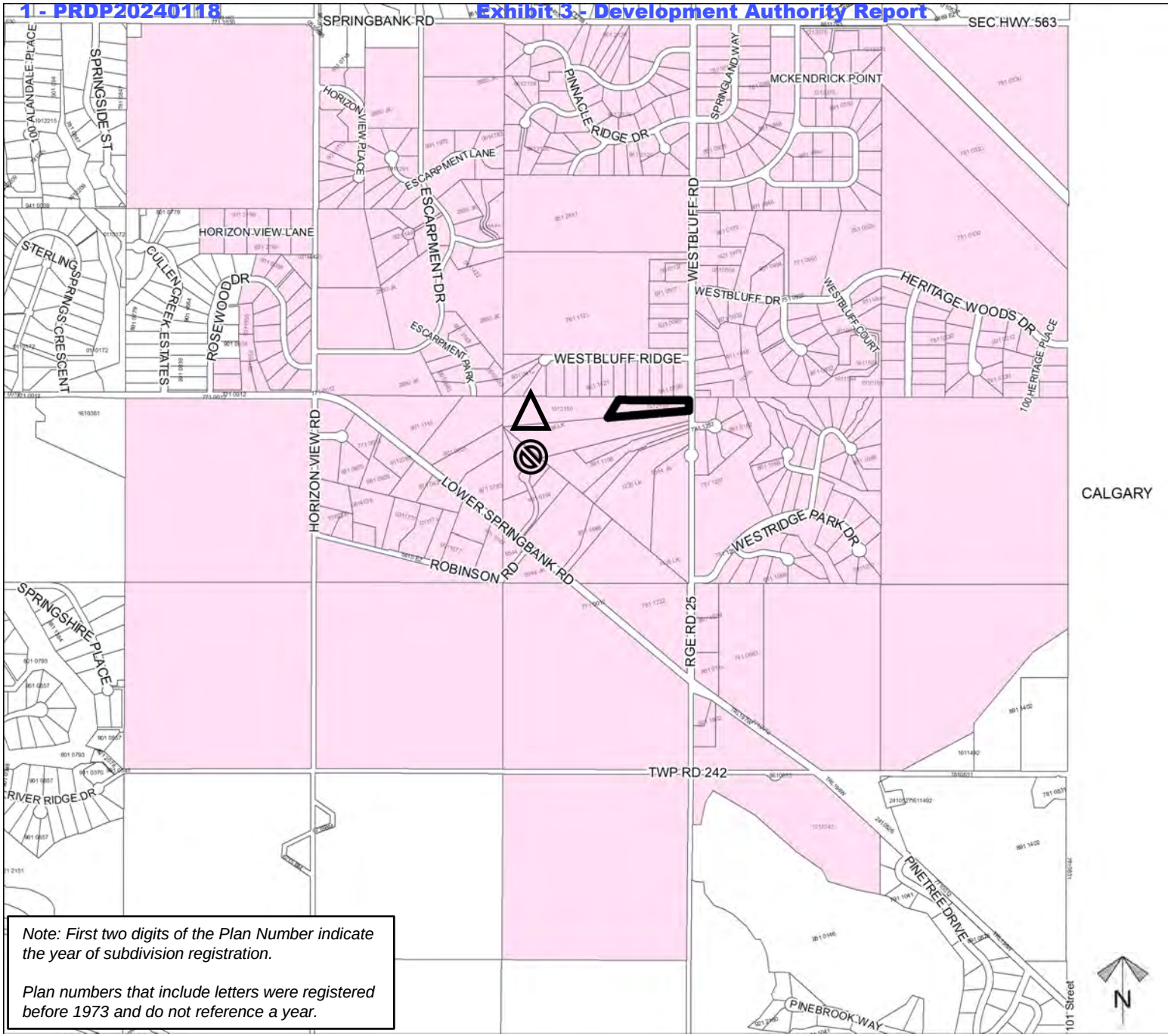
Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.



N

Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M



Note: First two digits of the Plan Number indicate the year of subdivision registration.

Plan numbers that include letters were registered before 1973 and do not reference a year.

ROCKY VIEW COUNTY

Landowner Circulation Area

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

Legend

Support ☆

Not Support ⊘

Concern △

Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

ROCKY VIEW COUNTY

Site Photos

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

Build Area looking North

Build Area looking South

Bottom of Slope looking East

Build Area looking West

Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

ROCKY VIEW COUNTY

Site Photos

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

From Westbluff Road Looking West

Adjacent Dwelling located West

Bottom of Slope looking West

Adjacent Stormwater Culvert

Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

NOTICE OF APPEAL

Subdivision & Development Appeal Board for Rocky View County

Enforcement Appeal Committee for Rocky View County

APPELLANT INFORMATION

Name of Appellant			
Bird, Richard & Cathryn			
Appellant Property Address	**Municipality**	**Province**	**Postal Code**
7 Clear Mountain Rise SW	Rocky View County	AB	T3Z 3J9
Mailing Address (if different than above)	**Municipality**	**Province**	**Postal Code**
Primary Phone #	**Alternate Phone #**	**Email Address**	
[redacted]	[redacted]	[redacted]	

PROPERTY UNDER APPEAL

Address	Legal Land Description (Lot, Block, Plan OR Quarter-Section-Township-Range-Meridian)
242253 Westbluff Road	Lot 4, Block 2, Plan 1512150, NE-18-24-03-05
Property Roll #	**Development Permit, Subdivision Application, or Enforcement Order #**
04618044	Application Number: PRDP20240118

I AM APPEALING THE DECISION ISSUED BY

☑ Development Authority ☐ Subdivision Authority ☐ Enforcement Services

REASONS FOR APPEAL (include as much detail as possible as to why you are appealing the decision, attach a separate page if required)

We are the owners of three lots on Clear Mountain Rise which are situated down slope, below the proposed development, including our primary residence. The proposed development includes regrading, excavation and placement of clean fill. We object to any such development if it modifies the existing natural elevation of the lot, its height relative to adjacent lots, the natural contours of the land or existing drainage patterns. Any such modifications would detract from the natural rural setting of our neighborhood, impair the natural beauty of the existing skyline above our properties, and adversely impact the value of our property. The development would also include relaxation to the minimum top-of-bank setback, which we would strongly object to. The setback exists to prevent hill top homes from looming over those below and there is no justification for such a relaxation, which would significantly adversely impact our properties.

ROCKY VIEW COUNTY RECEIVED MAR 13 2024 LEGISLATIVE AND INTERGOVERNMENTAL SERVICES

This information is collected under section 33(c) of the *Freedom of Information and Protection of Privacy Act* (*FOIP Act*) for the Subdivision and Development Appeal Board or the Enforcement Appeal Committee for Rocky View County and will be used to process your appeal and create a public record of the appeal hearing. Your name, legal land description, street address, and reasons for appeal will be made available to the public in accordance with section 40(1)(c) of the *FOIP Act*. Your personal contact information, including your phone number and email address, may be redacted prior to your appeal being made available to the public. If you have questions regarding the collection, use or disclosure of this information, please contact a Legislative Officer at 403-230-1401.

7 Clear Mountain Rise SW
Calgary, AB T3Z 3J9

March 7, 2024

Board Clerk
c/o Legislative & Intergovernmental Services
262075 Rocky View Point
Rocky View County
AB T4A 0X2

Dear Sir:

Please find enclosed our Notice of Appeal to the approval of a development permit, Application Number PRDP20240118, of which we were just advised, together with the requisite cheque for $250. The reasons for our appeal of and objection to this development are set out in the Notice form but essentially involve the anticipated adverse impacts to the natural rural character of our neighbourhood, to the natural beauty of the existing skyline, and to the value of our down slope home and properties, especially as a result of relaxing the minimum top-of-bank setback.

Yours truly,

J. Richard Bird

ROCKY VIEW COUNTY

262075 Rocky View Point
Rocky View County, AB, T4A 0X2

403-230-1401
questions@rockyview.ca
www.rockyview.ca

THIS IS NOT A DEVELOPMENT PERMIT

Please note that the appeal period *must* end before this permit can be issued and that any Prior to Release conditions (if listed) *must* be completed.

N O T I C E O F D E C I S I O N

Dean Thomas Design Group (Ryland Cook)

Tuesday, March 5, 2024

Roll: 04618044

RE: Development Permit #PRDP20240118

Lot 4, Block 2, Plan 1512150, NE-18-24-02-05; (242253 WESTBLUFF ROAD)

The Development Permit application for single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement has been **conditionally-approved** by the Development Officer subject to the listed conditions below **(PLEASE READ ALL CONDITIONS)**:

Description:

1. That the construction of a Dwelling, Single Detached, may commence on the subject lands, in accordance with the approved site plan and drawings, as prepared by Dean Thomas Design Group, Project Name: *242253 Westbluff RD, Rocky View County, AB*, Dwgs: A0.1 – A8.4, dated February 2, 2024, as amended, and conditions of approval including:
    i. Single-lot regrading, excavation, and placement of clean fill for the Dwelling, Single Detached, in accordance with the approved site plan and drawings;
    ii. Single-lot regrading, excavation, and placement of clean fill for the attached pool house and attached garage, in accordance with the approved site plan and drawings;
    iii. Single-lot regrading, excavation, and placement of clean fill for the personal use tennis court, in accordance with the approved site plan and drawings;
    iv. That the minimum top-of-bank setback requirement for the Dwelling, Single Detached, attached pool house and attached garage shall be relaxed ***in accordance with the approved site plan and required technical studies.***

Prior to Release:

2. That prior to release of this permit, the Applicant/Owner shall submit a Geotechnical Report including Slope Stability Analysis, prepared by a qualified professional, in accordance with Section 190 of the County's *Land Use Bylaw C-8000-2020* (LUB) and the County's Servicing Standards, to prove bank stability for the proposed Dwelling, Single Detached.
   The Geotechnical Report shall address:
    i. Slope stability, sewage disposal, water table levels, construction materials for roads, water servicing, stormwater drainage and any other relevant developmental constraints.
    ii. Recommendations for slope stability including registration of any required easements and/or restrictive covenants.

ROCKY VIEW COUNTY

262075 Rocky View Point
Rocky View County, AB, T4A 0X2

403-230-1401
questions@rockyview.ca
www.rockyview.ca

3. That prior to release of this permit, the Applicant/Owner shall submit a Deep Fills Report, prepared by a qualified professional, in accordance with the County's Servicing Standards, for all placed areas of clean fill greater than 1.20 m (3.93 ft.) in depth.
4. That prior to release of this permit, the Applicant/Owner shall submit a limited scope Site-Specific Stormwater Implementation Plan (SSIP) prepared by a qualified professional, in accordance with Springbank Drainage Strategies and the County's Servicing Standards.
   The SSIP shall include:
   i. A grading plan that illustrates the original ground profile; the depth of proposed fill; the total amount of soil to be imported/exported from the site; and analysis of the pre- and post-construction grades to determine whether there are any impacts to adjacent properties or the public road network.
   ii. Confirmation of pre- and post-construction conditions associated with site stormwater storage, unit area site releases, volume control target, and offsite drainage.
   iii. Recommendations for Erosion and Sediment Control (ESC) mitigation measures.
5. That prior to release of this permit, the Applicant/Owner shall submit a Construction Management Plan (CMP) addressing noise mitigation measures, traffic accommodation, sedimentation and dust control, erosion and weed control, construction practices, waste management, hazardous material containment and all other relevant construction management details.
6. That prior to release of this permit, the Applicant/Owner shall submit written confirmation of capacity availability from Westridge Water Utilities for piped water services for the subject development, in accordance with the approved subdivision Transmittal of Decision 2009-RV-061, Section 2.8.2 of the Central Springbank Area Structure Plan, and the County's Servicing Standards.
   i. That if capacity remains available via Westridge Water Utilities, the subject lands shall connect to the piped water supply with confirmation/documentation provided to the satisfaction of the Development Authority; and
   ii. That if capacity is not available via Westridge Water Utilities, the Applicant/Owner shall propose an acceptable alternative water supply for the subject development, to the satisfaction of the Development Authority.
7. That prior to release of this permit, the Applicant/Owner shall contact County Road Operations with haul details for materials and equipment needed during construction/site development to confirm if Road Use Agreements or permits shall be required for any hauling along the County road system and to confirm the presence of County road ban restrictions.
   i. The Applicant/Owner shall also discuss any requirements or improvements that may be required for the approach of Westbluff Road. If required, a New Road Approach application shall be submitted to County Road Operations.
   ii. Written confirmation shall be received from County Road Operations confirming the status of this condition. Any required agreement or permits shall be obtained unless otherwise noted by County Road Operations.

Permanent:

8. That if the prior to release conditions have not been met by **September 30, 2024**, or the approved extension date, then this approval is null and void and the Development Permit shall not be issued.

ROCKY VIEW COUNTY

262075 Rocky View Point
Rocky View County, AB, T4A 0X2

403-230-1401
questions@rockyview.ca
www.rockyview.ca

9. That any plan, technical submission, agreement, matter, or understanding submitted and approved as part of the application, in response to a Prior to Release condition, including the required Geotechnical Report, Deep Fills Report, SSIP, and CMP, shall be implemented, and adhered to in perpetuity and also includes:
    i. The Development Agreement for Site Improvements/Services Agreement (SISA), as registered on title, Instrument No. 151 190 262, as agreed upon between the landowner(s) and Rocky View County.
10. That the Applicant/Owner shall submit compaction testing to the County, verifying that the fill areas greater than 1.20 m. (3.93 ft.) in depth were placed in accordance with the overlying technical accepted by the County.
11. That the dwelling unit shall not be used as a *Vacation Rental* or for commercial purposes at any time, unless approved by a Development Permit.
12. That the pool house and tennis court shall not be used for commercial purposes at any time, unless approved by a Development Permit.
13. That this approval does not include an *Accessory Dwelling Unit*.
14. That there shall be a minimum of two (2) dedicated on-site parking stalls for the subject dwelling unit at all times.
15. That the Applicant/Owner shall take whatever means necessary to prevent visible dust associated with the development escaping the site and having adverse effects on adjacent roadways and properties.
16. That no topsoil shall be removed from the site. All topsoil shall be retained on-site and shall be re-spread on-site and seeded to grass or landscaped after building construction is complete, as part of site restoration.
17. That access to the subject parcel shall be via the existing mutual approach and driveway, as shown on the approved site plan and drawings.
    i. That the existing Access Easement (Instrument #151 190 264) shall remain registered on title, and shall not be discharged from title, unless an alternative physical and legal access acceptable to the County, has been approved for the subject parcel.
18. That the Applicant/Owner shall be responsible for rectifying any adverse effect on adjacent lands and access/driveway area from drainage alteration, including stormwater implications from the proposed development. Post-development drainage shall not exceed pre-development drainage.
    i. That any lot regrading and placement of clean fill shall not direct any additional overland surface drainage nor negatively impact existing drainage patterns in the County's road right-of-way of Westbluff Road.
19. That all on-site lighting, including private, site security and parking area lighting, shall be designed to conserve energy, reduce glare, and reduce uplight, in accordance with Sections 225 – 227 of the County's *Land Use Bylaw C-8000-2020*. All lighting shall be full cut-off (shielded) and be located and arranged so that no direct rays of light are directed at any adjoining properties, that may interfere with the use and enjoyment of neighbouring lands or interfere with the effectiveness of any traffic control devices or the vision/safety of motorists.

ROCKY VIEW COUNTY

262075 Rocky View Point
Rocky View County, AB, T4A 0X2

403-230-1401
questions@rockyview.ca
www.rockyview.ca

20. That if the development authorized by this Development Permit is not commenced with reasonable diligence within twelve (12) months from the date of issue and completed within twenty-four (24) months of the issue, the permit is deemed to be null and void, unless an extension to this permit shall first have been granted by the Development Officer.

Advisory:

- That the Applicant/Owner shall obtain a Building Permit and any applicable sub-trade permits through the County's Building Services department, prior to any construction taking place, using the appropriate checklists and application forms. Compliance with the *National Energy Code* is also required.
- That the subject development shall conform to the County's *Noise Control Bylaw C-8067-2020* and *Road Use Agreement Bylaw C-8323-2022*, in perpetuity.
- That the site shall remain free of Regulated, Prohibited Noxious or Noxious Weeds and the site shall be maintained in accordance with the *Alberta Weed Control Act [Statutes of Alberta, 2008 Chapter W-5.1, November 16, 2022].*
- That there shall be adequate water & sanitary sewer servicing provided for the subject dwelling unit.
- That it is the Applicant/Owner's responsibility to obtain and display a distinct municipal address in accordance with the County's *Municipal Addressing Bylaw (Bylaw C-7562-2016)*, for the subject dwelling unit, to facilitate accurate emergency response. The municipal address for the subject dwelling unit is *242253 WESTBLUFF ROAD*.
- That during construction, all construction and building materials shall be maintained on-site in a neat and orderly manner. Any debris or garbage shall be stored/placed in garbage bins and disposed of at an approved disposal facility.
- That any other federal, provincial, or County permits, approvals, and/or compliances, are the sole responsibility of the Applicant/Owner.

If Rocky View County does not receive any appeal(s) from you or from an adjacent/nearby landowner(s) by **Tuesday, March 26, 2024**, a Development Permit may be issued, unless there are specific conditions which need to be met prior to release. If an appeal is received, then a Development Permit will not be issued unless and until the decision to approve the Development Permit has been determined by the Subdivision and Development Appeal Board.

Regards,

Development Authority
Phone: 403-230-1401
Email: development@rockyview.ca

ROCKY VIEW COUNTY

DEVELOPMENT PERMIT
APPLICATION

FOR OFFICE USE ONLY	
APPLICATION NO.	PRDP20240118
ROLL NO.	04618044
RENEWAL OF	-
FEES PAID	$600.00
DATE OF RECEIPT	01/03/2024

APPLICANT/OWNER

Applicant Name: Ryland Cook	Email: ryland@deanthomas.ca
Business/Organization Name (if applicable): Dean Thomas Design Group	
Mailing Address: 1109 Olympic Way SE, Calgary AB	Postal Code: T2G 1B9
Telephone (Primary): 403 829 9285	Alternative: 403 719 6641

Landowner Name(s) per title (if not the Applicant): John and Claudine Lang-Hodge	
Business/Organization Name (if applicable):	
Mailing Address:	Postal Code:
Telephone (Primary): [redacted]	Email [redacted]

LEGAL LAND DESCRIPTION - Subject site

All/part of: NE ¼	Section: 18	Township: 24	Range: 02	West of: 5 Meridian	Division:
All parts of : Lot 4		Block: 2	Plan: 151 2150	Parcel Area (ac/ha): 4.69 ac	
Municipal Address: 242253 Westbluff Road			Land Use District: R-RUR (Residential, Rural)		

APPLICATION FOR - List use and scope of work

Stripping and grading activity in excess of 15.0m setback and fill above 1.0m

Variance Rationale included: ☐ YES ☑ NO ☑ N/A **DP Checklist Included:** ☑ YES☐NO **Name of RVC Staff Member Assisted:**

SITE INFORMATION

a.	Oil or gas wells present on or within 100 metres of the subject property(s)	☐ YES	☑ NO
b.	Parcel within 1.5 kilometres of a sour gas facility (well, pipeline or plant)	☐ YES	☑ NO
c.	Abandoned oil or gas well or pipeline present on the property (Well Map Viewer: https://extmapviewer.aer.ca/AERAbandonedWells/Index.html)	☐ YES	☑ NO
d.	Subject site has direct access to a developed Municipal Road (accessible public roadway)	☑ YES	☐ NO

AUTHORIZATION

I, Ryland Cook (Full name in Block Capitals), hereby certify (initial below):

___ That I am the registered owner **OR** RC That I am authorized to act on the owner's behalf.

RC That the information given on this form and related documents, is full and complete and is, to the best of my knowledge, a true statement of the facts relating to this application.

RC That I provide consent to the public release and disclosure of all information, including supporting documentation, submitted/contained within this application as part of the review process. I acknowledge that the information is collected in accordance with s.33(c) of the *Freedom of Information and Protection of Privacy Act*.

RC **Right of Entry:** I authorize/acknowledge that Rocky View County may enter the above parcel(s) of land for purposes of investigation and enforcement related to this application in accordance with Section 542 of the Municipal Government Act.

Applicant Signature Ryland Cook
Date 22-Dec-2023

Landowner Signature C. Lang-Hodge
Date Dec. 22, 2023

ROCKY VIEW COUNTY

STRIPPING, GRADING, EXCAVATION AND/OR FILL INFORMATION SHEET

FOR OFFICE USE ONLY	
APPLICATION NO.	PRDP20240118
ROLL NO.	04618044
DISTRICT	R-RUR (Residential, Rural)

DETAILS			APPLICATION FOR:
Total area of work (m^2 / ft^2 / ac.)	5594.7	sq. m.	☑ Site Stripping ☑ Fill ☑ Grading ☐ Re-contouring ☑ Excavation (cut-to-fill) ☐ Excavation (borrow areas) ☐ Construction of artificial waterbody (not including dugouts) ☐ Stockpiling ☐ Other:
Length (m / ft.)	94	m.	
Width (m / ft.)	62		
Height (m / ft.)			
Volume (m^3 / ft^3.)			
Number of truckloads (approx.)			
Slope factor (if applicable)			

DESCRIPTION OF WORK

Describe the purpose and intent of the work proposed (include cover letter for detailed description):

The work will function to prepare the lot for a walkout grade at the rear of the lane while building up the grade at the front of the property to achieve proper positive drainage away form the building. Most excavated material will be used as fill on the same sight.

Indicate the timing/duration of work (which shall not coincide with bird nesting seasons, as determined):

TBD

Indicate the effect(s) on existing drainage patterns or environmentally sensitive areas (i.e. riparian, wetland, other waterbodies etc,) if applicable:

The existing conceptual drainage will remain, however, overland drainage will be directed around the proposed building.

Confirm if proposed fill contains any rubble or hazardous substances:

TBD

ADDITIONAL REQUIREMENTS, in addition to DP Checklist - General requirements

The following must be included with the application (select if provided):

☐ Pre-development and Post-development grading plans
☐ Other documents: Stormwater Management Plan, Fill Management Plan, Soil Quality Report may be required
☑ **Cover letter shall address ALL of the following**:

- Soil-handling plan depicting movement of fill on the site and confirmation that soil will be transported when it is in a favourable condition (include this information on the Site/Grading Plan as necessary)
- Traffic control plan
- Weed Management Plan
- Costs (anticipated) to reclaim the site
- Methods to dust and erosion resulting from ongoing work

On the Site/Grading Plans:

☑ Dimensions and area(s) of excavation, fill, and/or grading
☑ Location of wetlands and watercourses and any ecologically sensitive features
☑ Location where the excavation, stripping, or grading is to be taking place
☐ Proposed access, haul routes, and haul activities

Applicant Signature Ryland Cook **Date** 12/22/23

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0036 760 049	1512150;2;4	231 131 689

LEGAL DESCRIPTION
PLAN 1512150
BLOCK 2
LOT 4
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 1.9 HECTARES (4.7 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 5;2;24;18;NE

MUNICIPALITY: ROCKY VIEW COUNTY

REFERENCE NUMBER: 151 234 989

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
231 131 689	01/05/2023	TRANSFER OF LAND	$2,150,000	$2,150,000

OWNERS

JOHN LANG-HODGE

AND
CLAUDINE LANG-HODGE
BOTH OF:
[redacted]
AS JOINT TENANTS

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
761 072 548	08/06/1976	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

(CONTINUED)

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
151 190 259	28/07/2015	UTILITY RIGHT OF WAY GRANTEE - ENMAX POWER CORPORATION. AS TO PORTION OR PLAN:1512151
151 190 261	28/07/2015	UTILITY RIGHT OF WAY GRANTEE - ROCKY VIEW COUNTY. AS TO PORTION OR PLAN:1512152
151 190 262	28/07/2015	CAVEAT RE : DEVELOPMENT AGREEMENT PURSUANT TO MUNICIPAL GOVERNMENT ACT CAVEATOR - ROCKY VIEW COUNTY. 911 - 32ND AVENUE NE CALGARY ALBERTA T2E6X6
151 190 264	28/07/2015	EASEMENT AS TO PORTION OR PLAN:1512153 OVER AND FOR BENEFIT: SEE INSTRUMENT
151 234 990	11/09/2015	RESTRICTIVE COVENANT OVER AND FOR BENEFIT OF: SEE INSTRUMENT AS TO PORTION DESCRIBED

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 22 DAY OF DECEMBER, 2023 AT 10:59 A.M.

ORDER NUMBER: 49209514

CUSTOMER FILE NUMBER:

END OF CERTIFICATE

DEANTHOMAS
DESIGN GROUP
1109 Olympic Way SE
Calgary, Alberta T2G 1B9
deanthomas.ca

DEVELOPMENT PERMIT PACKAGE FOR STRIPPING/GRADING/FILL

Proposed Development:
242253 Westbluff Drive
Rockyview County, AB
Lot 4
Block 2
Plan 151 2150

Existing Land Use:
R-RUR (to remain)

Scope of Work on Subject Property:

- Development of site to include large main house, greenhouse, and sports court area
- Large cut area required to achieve walkout grade
- Cut area at rear to be used to fill at front elevation
- Engineered fill over 1.0m required at south portion of lot
- Extent of grade manipulation to exceed 15.0m offset

Dear Rockyview County,

Thank you for accepting our application for stripping/grading and fill. The intention of this application is to capture the extent of grade manipulation required to achieve effective water management design on a large-scale home. The nature of the lot dictates a significant amount of cut grade at the rear, to be used as fill at the front of the property. Also given the slope of the lot to the south, and the configuration of the yard in this area, we will require engineered fill over 1.0m. Beyond this, the extent grading exceeds the required 15.0m offset. We will be involving a civil engineer in the project to complete any required slope-stability, and geotechnical reports, and will be provided at the earliest possible date. Further information surrounding volumes of materials and truckloads etc. will be determined via these reports.

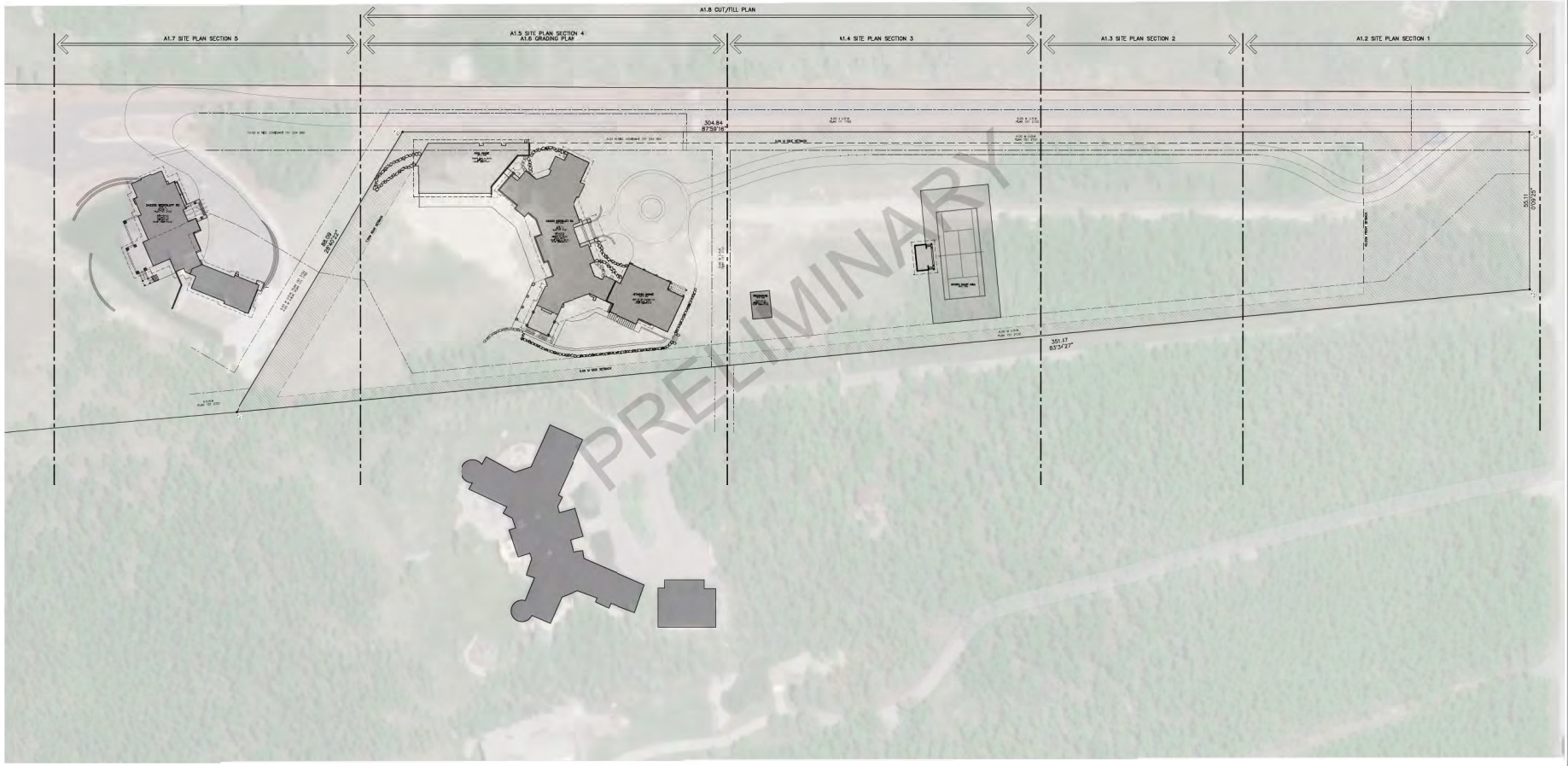
Thank you for your review and please contact us if you have any questions.

The following page has several site photos of the area.

Ryland Cook
Director of Production
Dean Thomas Design Group
ryland@deanthomas.ca
403 829 9285


WESTBLUFF RD
WESTBLUFF BAY


A-GEN
R-CRD
ML
.1
ESCARPMENT DR
ESCARPMENT PARK
WESTBLUFF RIDGE
WESTBLUFF RD
R-CRD
DC 14
WESTBLUFF DR
WESTBLUFF PLACE
WESTBLUFF COURT
R-CRD
R-RUR
R-RU
R-RUR
WESTBLUFF BAY
R-CRD
WESTWOOD RD
WILDROSE DR
LOWER SPRINGBANK RD
CLEARMOUNTAIN RISE
A-GEN
R-CRD
R-CRD
WESTRIDGE PARK DR



DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641

1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

ISSUED FOR
DEVELOPMENT PERMIT

242253 WESTBLUFF DRIVE
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W05M

REVISION SCHEDULE:

1.	ISSUED FOR DEVELOPMENT PERMIT	12/20/2023

DRAWN BY: __

FLOOR AREAS:

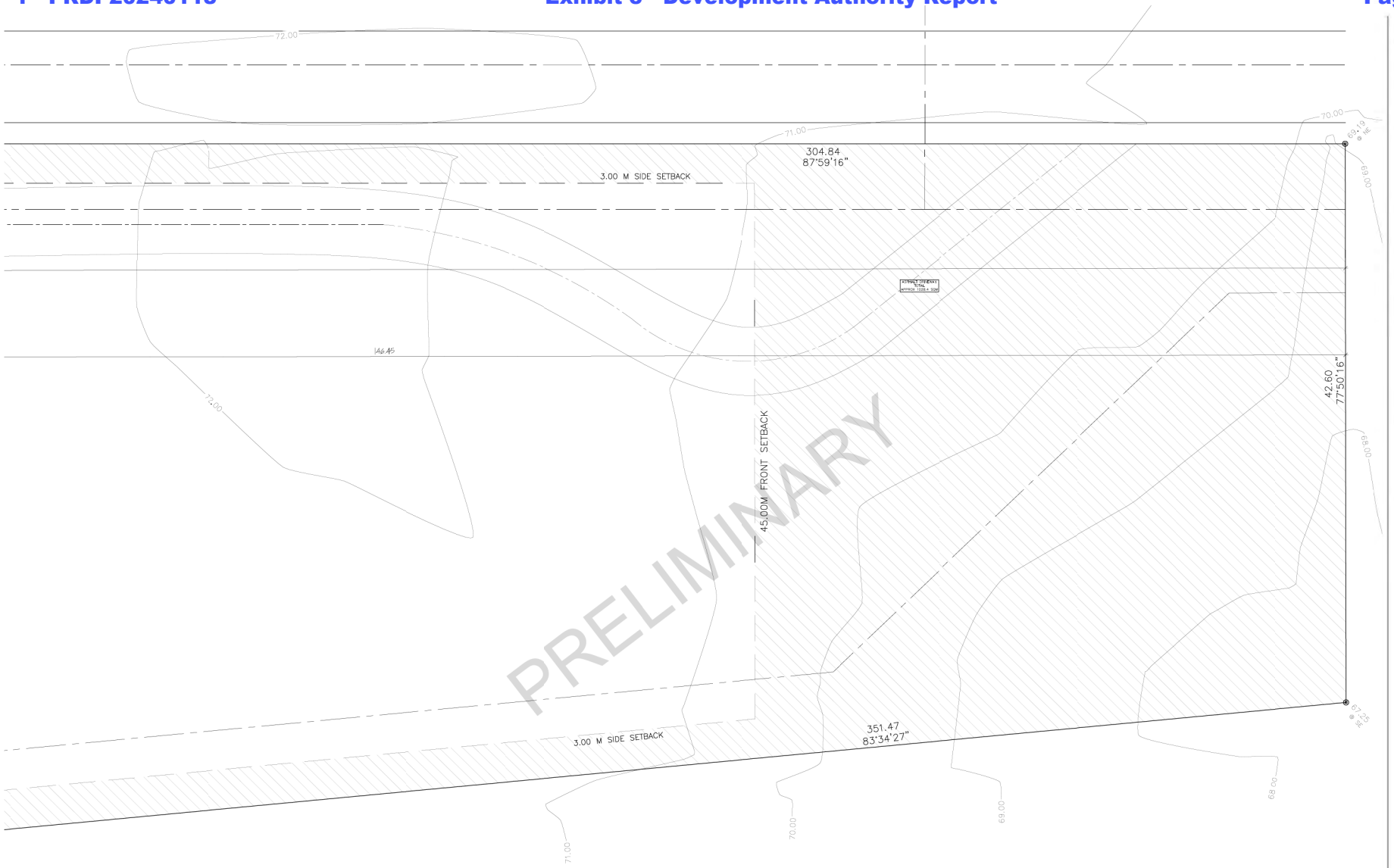
MAIN FLOOR AREA (DEVELOPED)	- SQ.FT.
UPPER FLOOR AREA (DEVELOPED)	- SQ.FT.
LOFT FLOOR AREA (DEVELOPED)	- SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	#### SQ.FT.
LOWER LEVEL AREA (DEVELOPED)	- SQ.FT.
ATTACHED GARAGE AREA	- SQ.FT.
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT.
COVERED VERANDA	- SQ.FT.
COVERED DECK	- SQ.FT.

DRAWING TITLE:

KEY PLAN

SCALE: 1:400
DATE: DEC 20, 2023

SHEET: A1.1



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T2G 1B9

PROJECT:

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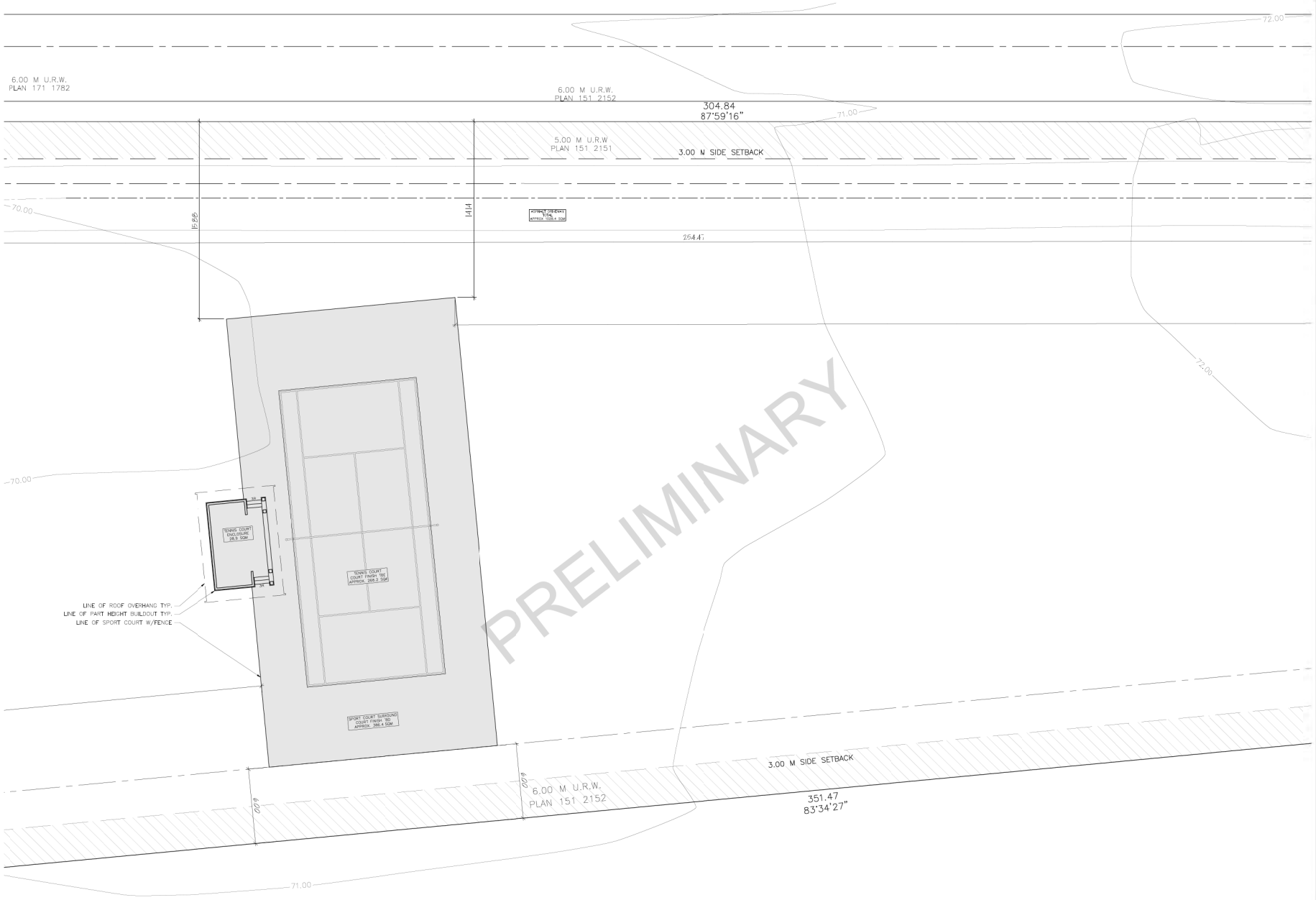
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT
COVERED VERANDA	- SQ.FT
COVERED DECK	- SQ.FT

DRAWING TITLE:

SITE PLAN
SECTION 1

SCALE: 1:100
DATE: DEC 20, 2023

SHEET: A1.2



DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

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ROCKYVIEW COUNTY, AB

LOT 4
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NE - 18 - 24 - 02 - W05M

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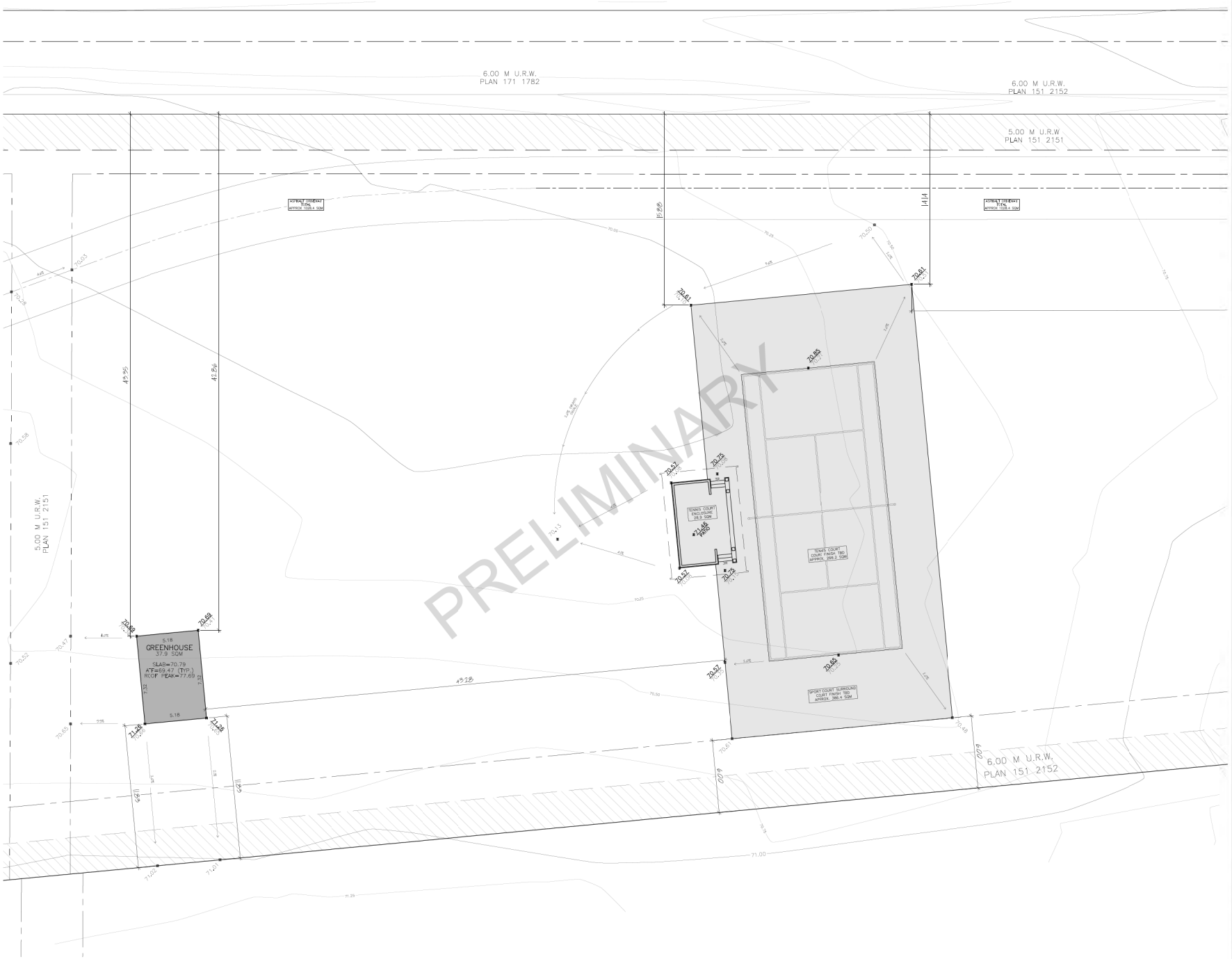
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT.
COVERED VERANDA	- SQ.FT.
COVERED DECK	- SQ.FT.

DRAWING TITLE:

SITE PLAN
SECTION 2

SCALE: 1:100
DATE: DEC 20, 2023

SHEET: A1.3



DEANTHOMAS
DESIGN GROUP

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1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

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DEVELOPMENT PERMIT

242253 WESTBLUFF DRIVE
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W5M

REVISION SCHEDULE:

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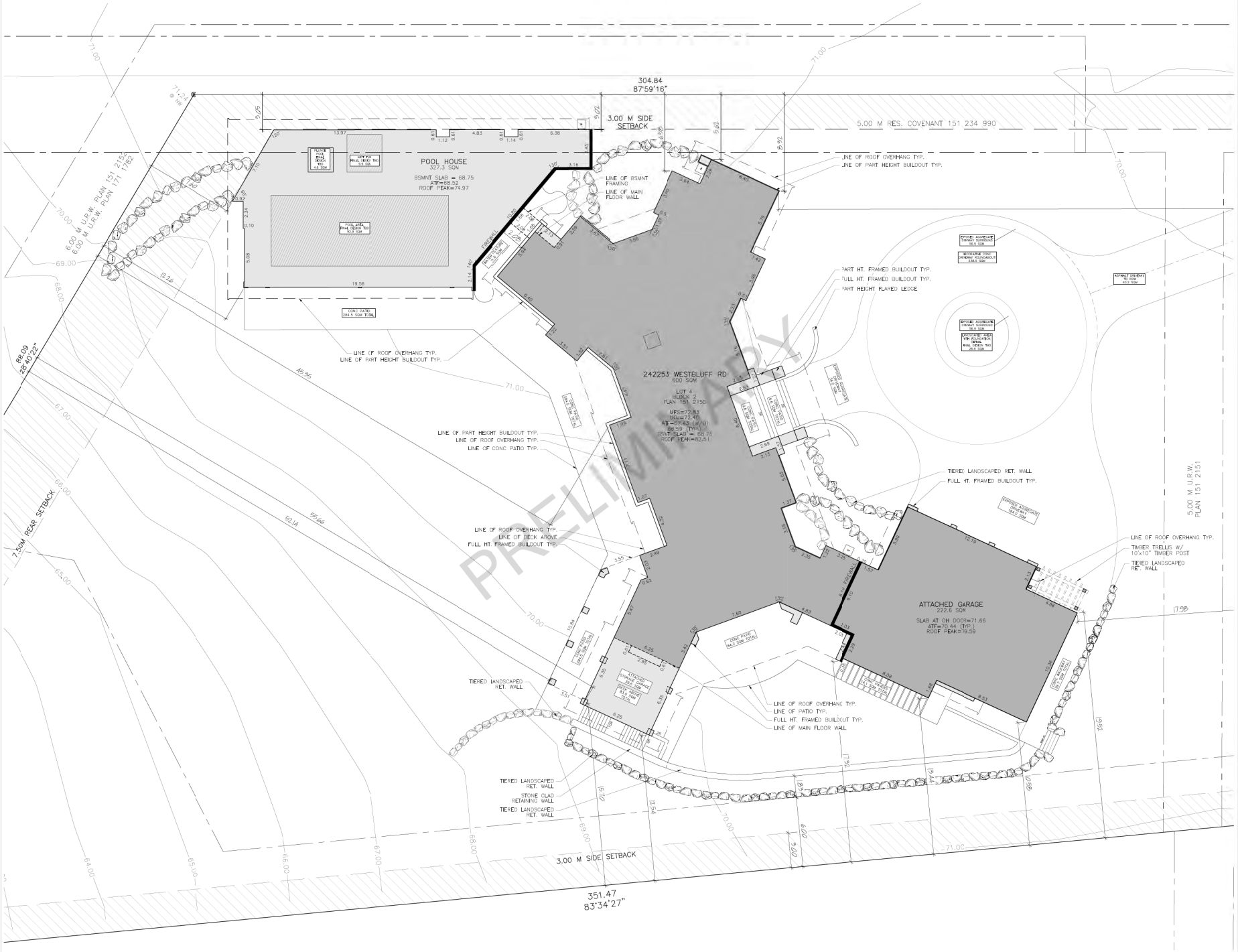
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT
COVERED VERANDA	- SQ.FT
COVERED DECK	- SQ.FT

DRAWING TITLE:

SITE PLAN
SECTION 3

SCALE: 1:100
DATE: DEC 20, 2023

SHEET: A1.4



DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

ISSUED FOR DEVELOPMENT PERMIT

242253 WESTBLUFF DRIVE
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W05M

REVISION SCHEDULE:

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DRAWN BY: __

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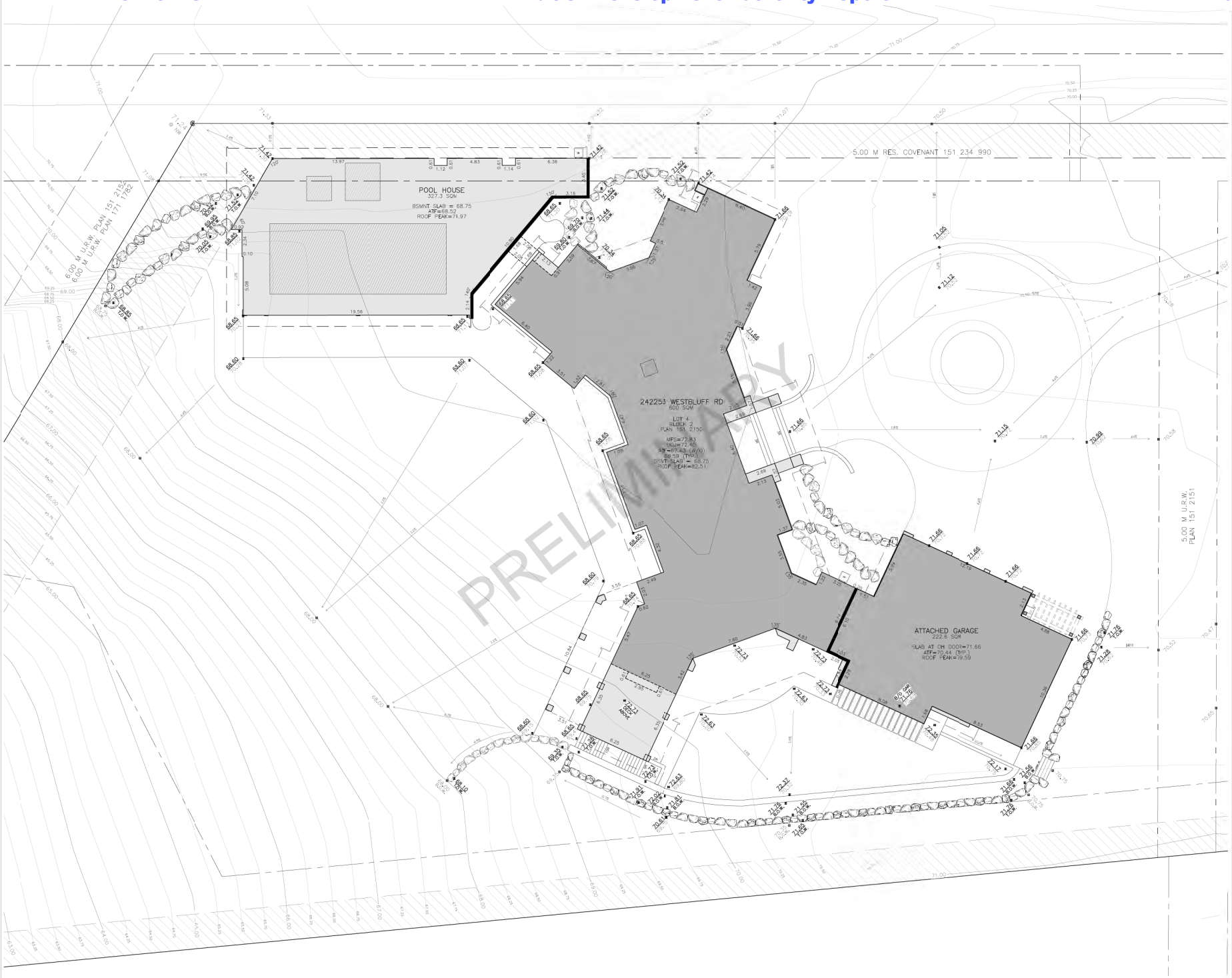
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT
COVERED VERANDA	- SQ.FT
COVERED DECK	- SQ.FT

DRAWING TITLE:

SITE PLAN
SECTION 4

SCALE: 1:100
DATE: DEC 20, 2023

SHEET: A1.5



DEANTHOMAS
DESIGN GROUP

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1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

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DEVELOPMENT PERMIT

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ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W05M

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DRAWN BY: __

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MECH/STORAGE	- SQ.FT.
COVERED VERANDA	- SQ.FT.
COVERED DECK	- SQ.FT.

DRAWING TITLE:

GRADING PLAN
SECTION 4

SCALE: 1:400
DATE: DEC 20, 2023

SHEET: A1.6

DEANTHOMAS
DESIGN GROUP

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1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

ISSUED FOR
DEVELOPMENT PERMIT

242253 WESTBLUFF DRIVE
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W05M

REVISION SCHEDULE:

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DRAWN BY: __

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ATTACHED GARAGE AREA	- SQ.FT.
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT.
COVERED VERANDA	- SQ.FT.
COVERED DECK	- SQ.FT.

DRAWING TITLE:

SITE PLAN
SECTION 5

SCALE: 1:100
DATE: DEC 20, 2023

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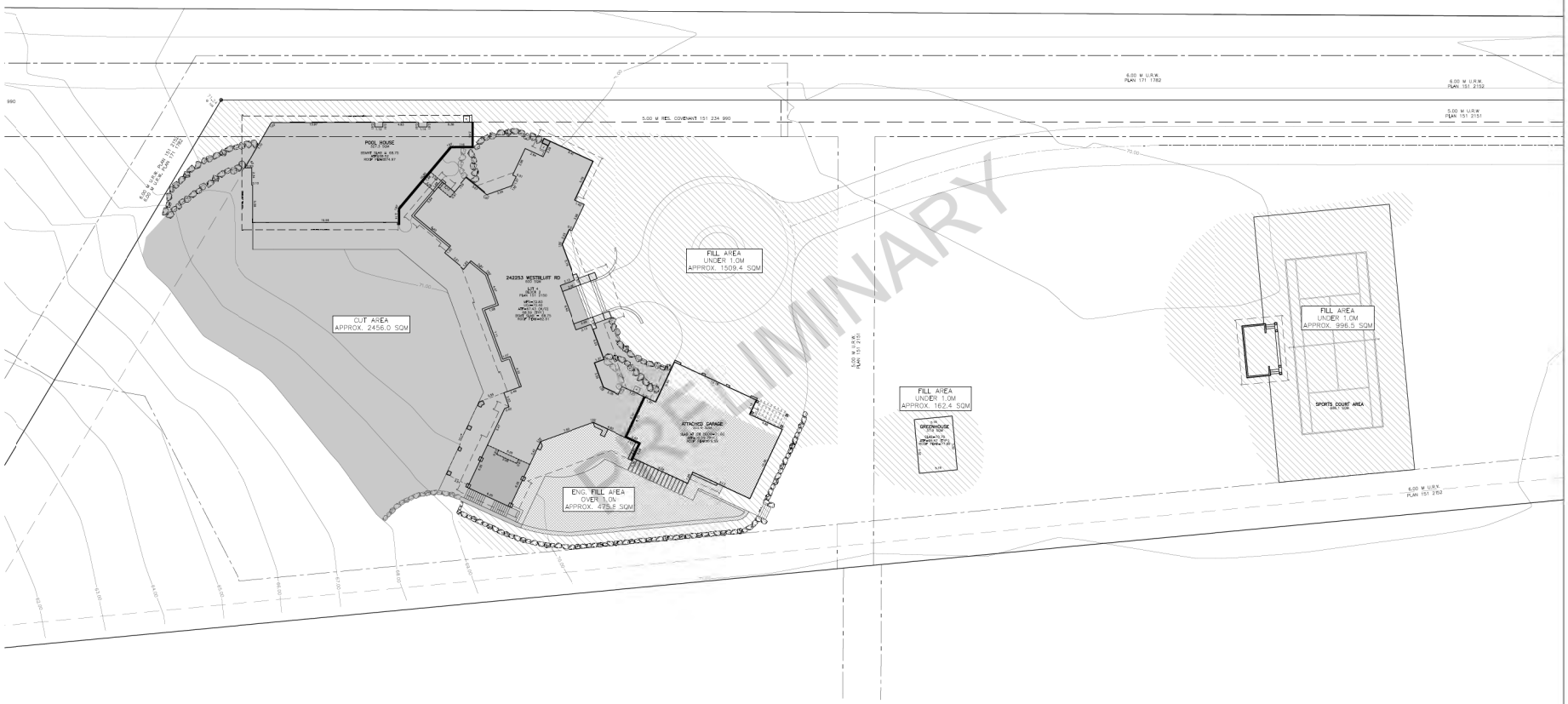

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641

1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

PROJECT:

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242253 WESTBLUFF DRIVE
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 151 2150
NE - 18 - 24 - 02 - W05M

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DRAWN BY: __

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ATTACHED GARAGE AREA	- SQ.FT.
DETACHED GARAGE AREA	- SQ.FT.
MECH/STORAGE	- SQ.FT
COVERED VERANDA	- SQ.FT
COVERED DECK	- SQ.FT

DRAWING TITLE:

CUT AND FILL PLAN

SCALE: 1:400
DATE: DEC 20, 2023

SHEET: A1.8

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, ALBERTA

LEGAL DESCRIPTION
LOT 4
BLOCK 2
PLAN 151250

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

FINAL DESIGN MAY DIFFER FROM 3D CONCEPTUAL IMAGES

ISSUED FOR PRICING REVISIONS: FEBRUARY 2, 2024

BUILDING NOTES

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-DO NOT SCALE DRAWINGS.

-VERIFY ALL DIMENSIONS, DATUMS, LEVELS, AND OTHER INFORMATION PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES OR OMISSIONS TO THE DESIGNER IMMEDIATELY.

-ALL WORK MUST COMPLY WITH THE MOST RECENT EDITION OF THE ALBERTA BUILDING CODE AND ANY OTHER GOVERNING AUTHORITIES.

-UTILITIES SUBJECT TO CHANGE LOCATION DEPENDING ON BUILDING SITE CONDITIONS.

-FINAL LOT GRADES MAY ALTER EXTERIOR APPEARANCE.

-ALL PLANS AND SITE PLANS ARE SUBJECT TO CHANGE DEPENDING ON ARCHITECTURAL CONTROL GUIDELINES AND BUILDER SPECIFICATIONS.

-REFER TO PERFORMANCE MODEL FOR ALL REQUIRED RSI VALUES.

-DO NOT USE FOIL BACKED INSULATION WITHOUT APPROVAL FROM THE AUTHORITY HAVING JURISDICTION.

- ALL STUCCO TO BE SMOOTH ACRYLIC STUCCO.

-FOOTINGS SHOWN ON DESIGN DRAWINGS ARE FOR REFERENCE ONLY. BUILDER TO VERIFY ALL FOOTING REQUIREMENTS WITH ENGINEERING AND LAYOUTS PRIOR TO CONSTRUCTION.

-4'-0" MIN FROST COVER REQUIRED AS PER ABC. SUBJECT TO ACTUAL SITE PLAN GRADES OR GRADE SLIP.

-BUILDER TO COORDINATE MECHANICAL DESIGN WITH ENGINEERING AND LAYOUTS AS REQUIRED TO AVOID CONFLICTS.

-ALL BEAMS, LINTELS, JOISTS, AND TRUSSES AS PER SUPPLIER'S LAYOUT PACKAGE.

DRAWING LIST

A0.1 - GENERAL NOTES
A1.1 - KEY PLAN
A1.2 - SITE PLAN SECTION 1
A1.3 - SITE PLAN SECTION 2
A1.4 - SITE PLAN SECTION 3
A1.5 - SITE PLAN SECTION 4
A1.6 - GRADING PLAN SECTION 4
A1.7 - SITE PLAN SECTION 5
A1.8 - CUT FILL PLAN

A2.1 - ELEVATIONS
A2.2 - ELEVATIONS
A2.3 - ELEVATIONS
A2.4 - ELEVATIONS
A2.5 - ELEVATIONS
A2.6 - ELEVATIONS
A2.7 - ELEVATIONS

A3.1 - BUILDING 1 FOUNDATION PLAN
A3.2 - BUILDING 1 MAIN FLOOR PLAN
A3.3 - BUILDING 1 ROOF PLAN

A3.4 - BUILDING 2 FOUNDATION PLAN
A3.5 - BUILDING 2 LOWER LEV DEV PLAN
A3.6 - BUILDING 2 MAIN FLOOR PLAN
A3.7 - BUILDING 2 RAISED TRUSS PLAN
A3.8 - BUILDING 2 ROOF PLAN

A3.9 - BUILDING 3 FOUNDATION PLAN
A3.10 - BUILDING 3 LOWER LEV DEV PLAN
A3.11 - BUILDING 3 ROOF PLAN

A4.1 - SECTIONS
A4.2 - SECTIONS
A4.3 - SECTIONS
A4.4 - SECTIONS
A5.1 - WINDOW AND DOOR SCHEDULE
A5.2 - WINDOW AND DOOR SCHEDULE
A6.1 - GREENHOUSE
A7.1 - SPORTS COURT
A7.2 - SPORTS COURT

A8.1 - PRELIMINARY BUILDING DETAILS
A8.2 - CONSTRUCTION DETAILS
A8.3 - CONSTRUCTION DETAILS
A8.4 - CONSTRUCTION DETAILS

CONSTRUCTION NOTES

GENERAL NOTES

ARCHITECTURAL DESIGN DRAWINGS CONTAINED IN THIS PACKAGE DEMONSTRATE THE OVERALL DESIGN INTENT AND ARE TO BE READ IN CONJUNCTION WITH ALL BUILDER SPECIFICATIONS, INTERIOR DESIGN, ENGINEERING, AND SUPPLIER DOCUMENTS.

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ALL WORK MUST COMPLY WITH THE MOST RECENT EDITION OF THE LOCAL BUILDING CODE AND BYLAWS SET BY THE AUTHORITY HAVING JURISDICTION.

FINAL LOT GRADES MAY ALTER EXTERIOR APPEARANCE.

EXTERIOR DIMENSIONS TAKEN TO FACE OF WALL SHEATHING OR CONCRETE. INTERIOR DIMENSIONS TAKEN TO FACE OF STUD UNLESS NOTED OTHERWISE.

VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS, DATUMS, LEVELS, AND OTHER INFORMATION PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES OR OMISSIONS TO DEAN THOMAS DESIGN GROUP IMMEDIATELY.

UTILITIES SUBJECT TO CHANGE LOCATION DEPENDING ON SITE CONDITIONS. VERIFY LOCATION WITH GRADE SLIP IF AVAILABLE.

ALL PLANS AND SITE PLANS ARE SUBJECT TO CHANGE DEPENDING ON ARCHITECTURAL CONTROL GUIDELINES AND BUILDER SPECIFICATIONS.

DO NOT SCALE DRAWINGS.

PRODUCTS & MATERIALS

PRODUCTS AND MATERIALS SUCH AS INSULATIONS, MEMBRANES, SEALANTS, FINISHES ETC. MUST HAVE CCMC REGISTRATION AND ARE TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

EXTERIOR FINISH MATERIALS, SOFFIT, FASCIA, RAINWARE, ROOF FINISH, ETC. AS PER A2.0 SERIES ELEVATION DRAWINGS.

INTERIOR FINISH MATERIALS AS PER BUILDER SPECIFICATIONS OR INTERIOR DESIGN DOCUMENTS.

ALL STUCCO TO BE SMOOTH ACRYLIC STUCCO UNO.

WOOD WITHIN 6" (150mm) OF CONCRETE OR GRADE SHALL BE PRESSURE TREATED OR SEPARATED WITH 6 mil POLY OR APPROVED GASKET MATERIAL.

ROOFING TYPE AND SLOPE LIMIT: NORMAL ASPHALT SHINGLES: MIN 4:12, LOW SLOPE ASPHALT SHINGLES MIN 2:12, MODIFIED BITUMINOUS MEMBRANE (TORCH ON) MIN .25 MAX 3:12 PROFILED METAL ROOFING MIN 3:12 UNLESS OTHERWISE APPROVED BY MANUFACTURER

EXTERIOR FINISH MATERIALS REPRESENTED IN THIS DRAWING PACKAGE ARE SCHEMATIC ONLY AND MAY NOT REPRESENT FINAL PRODUCT SELECTIONS.

SADDLE THE UP SLOPE SIDE OF ALL FLAT PROJECTIONS AND VALLEYS. ALL SADDLES SHALL BE INSTALLED WITH A FINISHED SLOPE OF MIN 2%

PROVIDE EAVE AND VALLEY PROTECTION UNDERLAYMENT AS REQUIRED.

EXTERIOR WALLS WITH GREATER THAN 0.6m AND LESS THAN 1.2m LIMITING DISTANCE REQUIRE NON COMBUSTIBLE CLADDING OR CLADDING INSTALLED DIRECTLY OVER 1/2" EXTERIOR GYPSUM BOARD, OR EQUIVALENT, AND 5/8" FIRE RATED INTERIOR GYPSUM BOARD.

ROOF SOFFITS THAT PROJECT TO LESS THAN 1.2m LIMITING DISTANCE SHALL HAVE NO OPENINGS AND ARE REQUIRED TO BE UNVENTED OR INSTALLED DIRECTLY OVER 1/2" EXTERIOR GYPSUM BOARD.

NBC2019(AE) VARIANCE 19-BDV-017 PERMITS INTUMESCENT COATING ON VENTED SUBSTRATE WITH STANDARD VENTED SOFFIT COVER.

BUILD OUT FRAMING AT WINDOWS AND DOORS TO BE ADJUSTED ON SITE TO ENSURE EXTERIOR FINISH MATERIAL CLEARANCE.

BUILDING ENVELOPE

REFER TO ENERGY MODEL FOR 9.36 PERFORMANCE COMPLIANCE PATH AND ALL RSI VALUES TO DETERMINE INSULATION THICKNESS.

DO NOT USE FOIL BACKED INSULATION WITHOUT APPROVAL FROM THE AUTHORITY HAVING JURISDICTION.

THIRD PARTY ENVELOPE ENGINEERING MAY BE REQUIRED FOR UNVENTED ROOFS AND BALCONY OVER INTERIOR SPACE.

MECHANICAL & ELECTRICAL

BUILDER TO COORDINATE MECHANICAL DESIGN WITH ENGINEERING AND SUPPLIER LAYOUTS. JOIST SPACING MAY BE ADJUSTED AS REQUIRED TO AVOID CONFLICTS AS PERMITTED BY SUPPLIER.

ELECTRICAL PLANS CONTAINED IN THIS DRAWING PACKAGE DEMONSTRATE BASIC CODE COMPLIANCE AND ARE TO BE REVIEWED WITH THE CUSTOMER AND CONTRACTOR TO CONFIRM FINAL DESIGN.

ENGINEERING & SUPPLIER LAYOUTS

DEAN THOMAS DESIGN GROUP REQUIRES REVIEW AND COORDINATION WITH THE ENGINEERING DOCUMENTS AND SUPPLIER LAYOUTS PRIOR TO CONSTRUCTION.

FOOTINGS SHOWN ON DESIGN DRAWINGS ARE FOR REFERENCE ONLY. BUILDER TO VERIFY ALL FOOTING REQUIREMENTS WITH ENGINEERING DOCUMENTS AND SUPPLIER LAYOUTS PRIOR TO CONSTRUCTION.

MIN 4'-0" (1.2m) FROST COVER REQUIRED LOCAL BUILDING CODE VERIFY WITH ENGINEERING. SUBJECT TO ACTUAL SITE PLAN GRADES OR GRADE SLIP.

CONFIRM SHEATHING THICKNESS AND FASTENING REQUIREMENTS WITH ENGINEERING DOCUMENTS AND SUPPLIER LAYOUTS.

INTERIOR LOAD BEARING WALL STUDS TO LINE UP WITH FLOOR JOISTS FOR HEATING AND PLUMBING RISERS.

ALL BEAMS, LINTELS, JOISTS, AND TRUSSES AS PER SUPPLIER LAYOUTS UNLESS NOTED OTHERWISE.

CONSTRUCTION ASSEMBLIES

SLOPED ROOF

ROOF FINISH MATERIAL

ROOF MEMBRANE

MIN 7/16" ROOF SHEATHING SHEATHING C/W H-CLIPS

ENGINEERED ROOF TRUSSES

INSULATION STOPS

INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS

MIN 6 MIL POLY VAPOUR BARRIER

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

GREEN ROOF

GROWING MEDIUM

DRAINAGE GRAVEL

TRAY ON ADJUSTABLE PEDESTALS

DRAINAGE MAT

MODIFIED BITUMINOUS MEMBRANE

MIN 1/2" COVER BOARD

SLOPE PACKAGE TO PROVIDE MIN 2% SLOPE TO DRAIN

MIN 3/4" TONGUE AND GROOVE ROOF SHEATHING

ENGINEERED ROOF JOISTS

2lb SPRAY FOAM INSULATION

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

2% LOW SLOPE ROOF

MODIFIED BITUMINOUS MEMBRANE

MIN 1/2" COVER BOARD

SLOPE PACKAGE TO PROVIDE MIN 2% SLOPE TO DRAIN

MIN 3/4" TONGUE AND GROOVE ROOF SHEATHING

ENGINEERED ROOF JOISTS

2lb SPRAY FOAM INSULATION

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

EXTERIOR WALL

EXTERIOR FINISH MATERIAL

VAPOUR PERMEABLE WEATHER RESISTANT BARRIER

MIN 3/8" WALL SHEATHING

2x6 WALL STUDS UNO

INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS

MIN 6 MIL POLY VAPOUR BARRIER

MIN 1/2" GYPSUM WALL BOARD W/ ALL SEAMS TAPED

FOUNDATION WALL

PARGING TO MIN 8" BELOW GRADE

DAMP PROOFING MEMBRANE

8" CONCRETE WALL UNO

1/2" AIR SPACE

2x6 WALL STUDS UNO

INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS

6 MIL POLY VAPOUR BARRIER

MIN 1/2" GYPSUM WALL BOARD W/ ALL SEAMS TAPED

INTERIOR FLOOR

FLOOR FINISH MATERIAL

MIN 3/4" TONGUE AND GROOVE FLOOR SHEATHING GLUED AND SCREWED

ENGINEERED FLOOR JOISTS

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

FLOOR OVER UNHEATED SPACE

FLOOR FINISH MATERIAL

MIN 3/4" TONGUE AND GROOVE FLOOR SHEATHING GLUED AND SCREWED

ENGINEERED FLOOR JOISTS

INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS. DOUBLE JOIST CAVITIES TO BE INSULATED PRIOR TO INSTALL

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

FLOOR SLAB W/ INTEGRATED HEATING

FLOOR FINISH MATERIAL

4" CONCRETE FLOOR SLAB W/ INTEGRATED HEATING UNO

MIN 6 mil POLY VAPOUR BARRIER

INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS

MIN 6" GRAVEL SUB BASE

BALCONY OVER INTERIOR SPACE

BALCONY FLOOR FINISH MATERIAL ON ADJUSTABLE PEDESTALS

MODIFIED BITUMINOUS MEMBRANE

MIN 1/2" COVER BOARD

SLOPE PACKAGE TO PROVIDE MIN 2% SLOPE TO DRAIN

MIN 3/4" TONGUE AND GROOVE ROOF SHEATHING

ENGINEERED ROOF JOISTS

2lb SPRAY FOAM INSULATION

MIN 1/2" GYPSUM CEILING BOARD W/ ALL SEAMS TAPED

RIM JOISTS

EXTERIOR FINISH MATERIAL

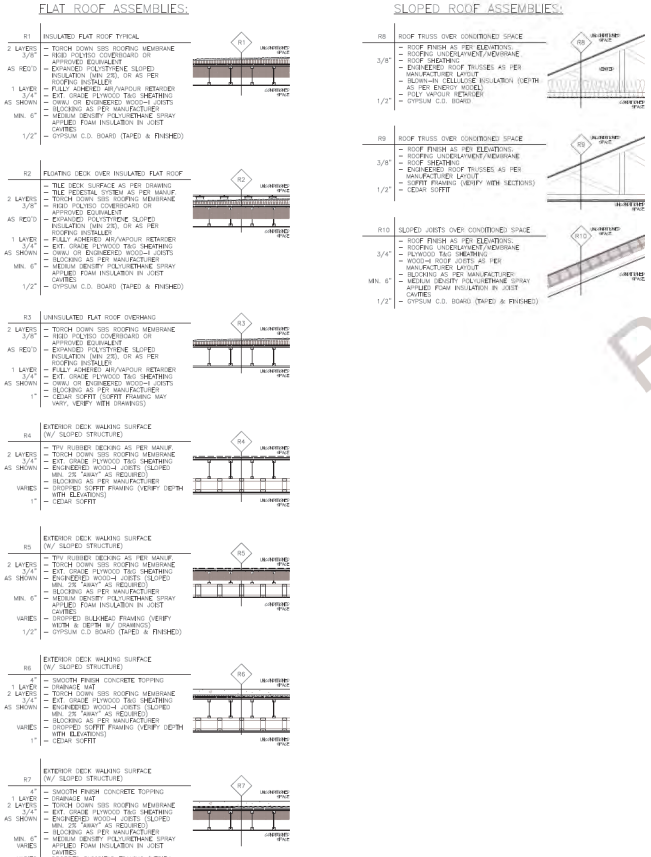
VAPOUR PERMEABLE WEATHER RESISTANT BARRIER

MIN 3/8" WALL SHEATHING

ENGINEERED RIM JOIST

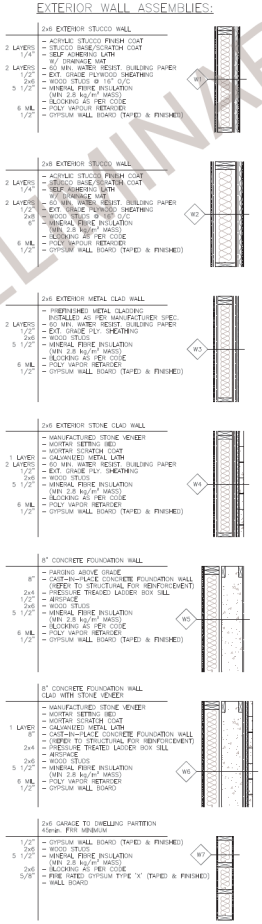
INSULATION AS PER 9.36 COMPLIANCE DOCUMENTS

FLAT ROOF ASSEMBLIES:

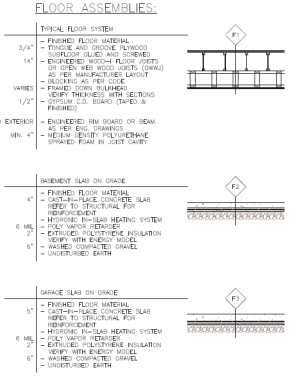


SLOPED ROOF ASSEMBLIES:

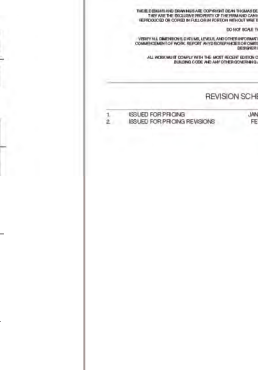
EXTERIOR WALL ASSEMBLIES:



FLOOR ASSEMBLIES:



PARTITION ASSEMBLIES:



ASSEMBLY NOTES: REVIEW ALL NOTES PRIOR TO CONSTRUCTION

PARAPET ASSEMBLIES:

1. INSTALL ALL PRODUCTS AS PER MANUFACTURERS SPECIFICATIONS
2. REFER TO PLANS FOR SCUPPER LOCATIONS. FINAL LOCATION MAY VARY AT DISCRETION OF ROOFER. FINAL WATER MANAGEMENT TO COMPLY WITH LOCAL BYLAWS
3. PROVIDE ROOF CANT AT BASE OF PARAPET AS REQUIRED

ROOF ASSEMBLIES:

1. INSTALL ALL PRODUCTS AS PER MANUFACTURERS SPECIFICATIONS
2. FINAL JOIST SPACING AS PER ENGINEERED LAYOUTS
3. INSULATION VALUES TO FOLLOW ENERGY CONSULTANT SPECIFICATIONS
4. EXCEPT WHERE ASSEMBLIES WITH WOOD I-JOISTS ARE TESTED ACCORDING TO CAN/ULC-S101 THE FIRE RESISTANCE RATING VALUES APPLY ONLY TO I-JOISTS THAT HAVE BEEN FABRICATED WITH PHENOLIC-BASED STRUCTURAL WOOD ADHESIVE COMPLYING WITH CSA O112.10. FOR I JOISTS WITH FLANGES MADE OF LAMINATED VENEER LUMBER THE FIRE RESISTANCE RATING VALUES APPLY ONLY WHERE THE ADHESIVE USED IN THE LVL FABRICATION IS A PHENOLIC BASED STRUCTURAL WOOD ADHESIVE COMPLYING

FLOOR ASSEMBLIES:

1. INSTALL ALL PRODUCTS AS PER MANUFACTURERS SPECIFICATIONS
2. ALL INTERCONNECTED FLOOR SPACES TO HAVE FIRE RESISTANCE RATING AS NOTED ON RELEVANT WALL ASSEMBLY
3. REFER TO STRUCTURAL ENGINEERING DRAWINGS FOR JOIST SPACING
4. WOOD BLOCKING TO RUN PERPENDICULAR TO JOISTS
5. EXCEPT WHERE ASSEMBLIES WITH WOOD I-JOISTS ARE TESTED ACCORDING TO CAN/ULC-S101 THE FIRE RESISTANCE RATING VALUES APPLY ONLY TO I-JOISTS THAT HAVE BEEN FABRICATED WITH PHENOLIC-BASED STRUCTURAL WOOD ADHESIVE COMPLYING WITH CSA O112.10. FOR I JOISTS WITH FLANGES MADE OF LAMINATED VENEER LUMBER THE FIRE RESISTANCE RATING VALUES APPLY ONLY WHERE THE ADHESIVE USED IN THE LVL FABRICATION IS A PHENOLIC BASED STRUCTURAL WOOD ADHESIVE COMPLYING
6. REFER TO RADON EXHAUST DETAIL AND WEEPING TILE DETAIL FOR POLYETHERLENE CONNECTION AT EXTERIOR WALL

EXTERIOR WALL ASSEMBLIES:

1. INSTALL ALL PRODUCTS AS PER MANUFACTURERS SPECIFICATIONS
2. ALL ENGINEERED WALL ASSEMBLIES AS PER ENGINEERED DRAWINGS
3. BUILDER TO COORDINATE MECHANICAL DESIGN WITH STRUCTURAL ENGINEERING AND LAYOUTS AS REQUIRED TO AVOID CONFLICTS
4. WHEN POSSIBLE ALL STUD SPACING TO ALIGN WITH JOISTS AT STRUCTURAL WALL
5. ALL BEAMS, LINTELS, JOISTS AND TRUSSES AS PER STRUCTURAL ENGINEERING DRAWINGS AND SUPPLIERS LAYOUT PACKAGE
6. REFER TO STRUCTURAL ENGINEERING DRAWINGS FOR ALL WALL THICKNESSES
7. MOISTURE RESISTANT TILE BACKER ROD REQUIRED WHEN FACING TUB/SHOWER
8. USE MOLD RESISTANT GYPSUM WALL BOARD IN BASEMENT WALLS, WASHROOM WALLS AND WET AREAS

INTERIOR PARTITION ASSEMBLIES:

1. INSTALL ALL PRODUCTS AS PER MANUFACTURERS SPECIFICATIONS
2. ALL ENGINEERED WALL ASSEMBLIES AS PER ENGINEERED DRAWINGS
3. BUILDER TO COORDINATE MECHANICAL DESIGN WITH STRUCTURAL ENGINEERING AND LAYOUTS AS REQUIRED TO AVOID CONFLICTS
4. WHEN POSSIBLE ALL STUD SPACING TO ALIGN WITH JOISTS AT STRUCTURAL WALL
5. REFER TO STRUCTURAL ENGINEERING DRAWINGS FOR ALL WALL THICKNESSES
6. MOISTURE RESISTANT TILE BACKER ROD REQUIRED WHEN FACING TUB/SHOWER
7. USE MOLD RESISTANT GYPSUM WALL BOARD IN BASEMENT WALLS, WASHROOM WALLS AND WET AREAS
8. REINFORCED WITH BLOCKING TO BE USED AT TILE AND STONE VENEER CLAD WALL ASSEMBLIES

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0802
544 47TH AVENUE NW
CALGARY, ALBERTA
T3E 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1

ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	492 SQ.FT.
MECHANICAL AREA	45 SQ.FT.

BUILDING 2

LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4439 SQ.FT.
MECH-STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLOCK)	9261 SQ.FT.

BUILDING 3

DEVELOPED POOL AREA	5219 SQ.FT.
MECH-STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

GENERAL NOTES

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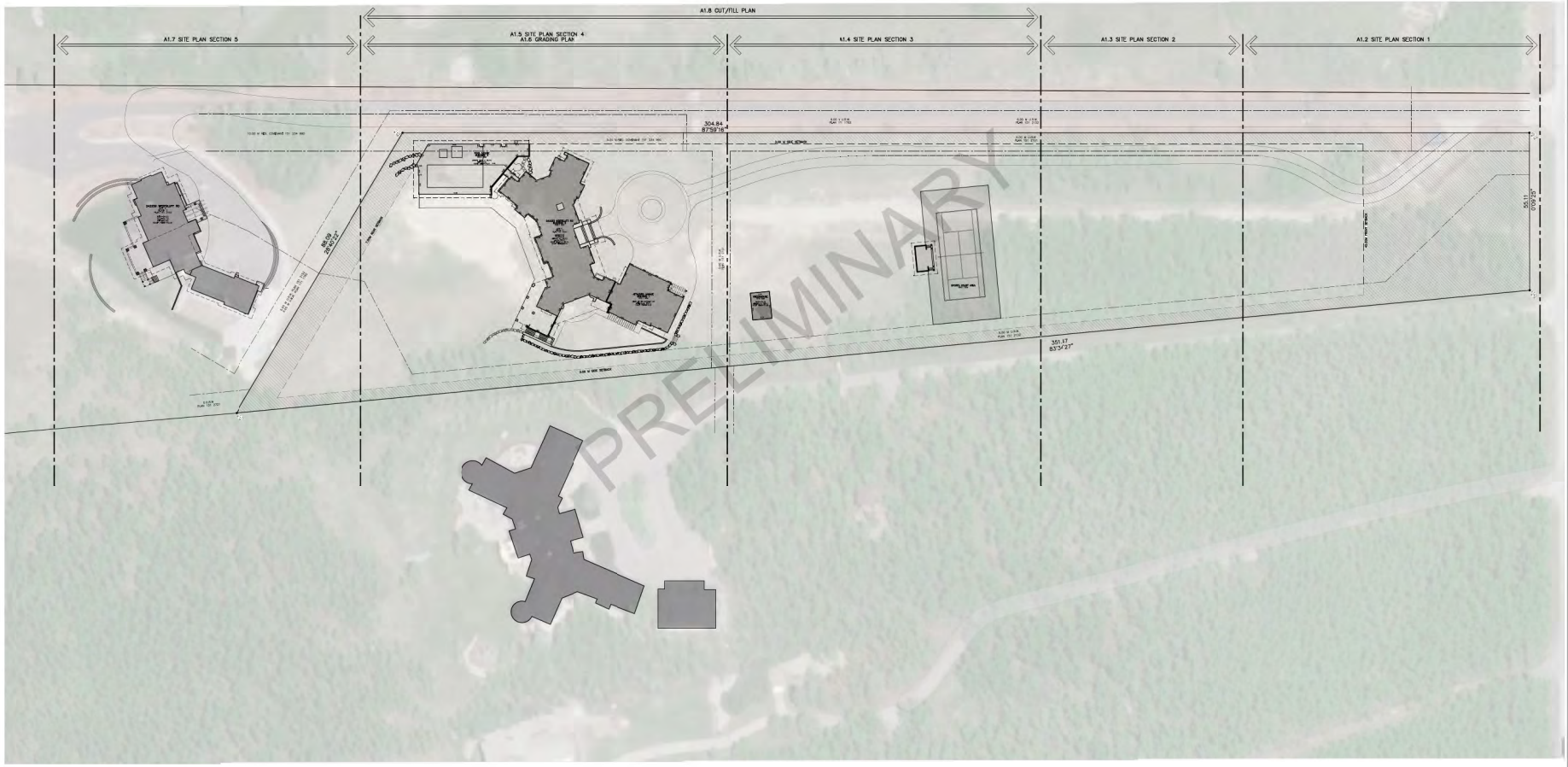
DATE: FEB 2, 2024

SHEET: A0.1



DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

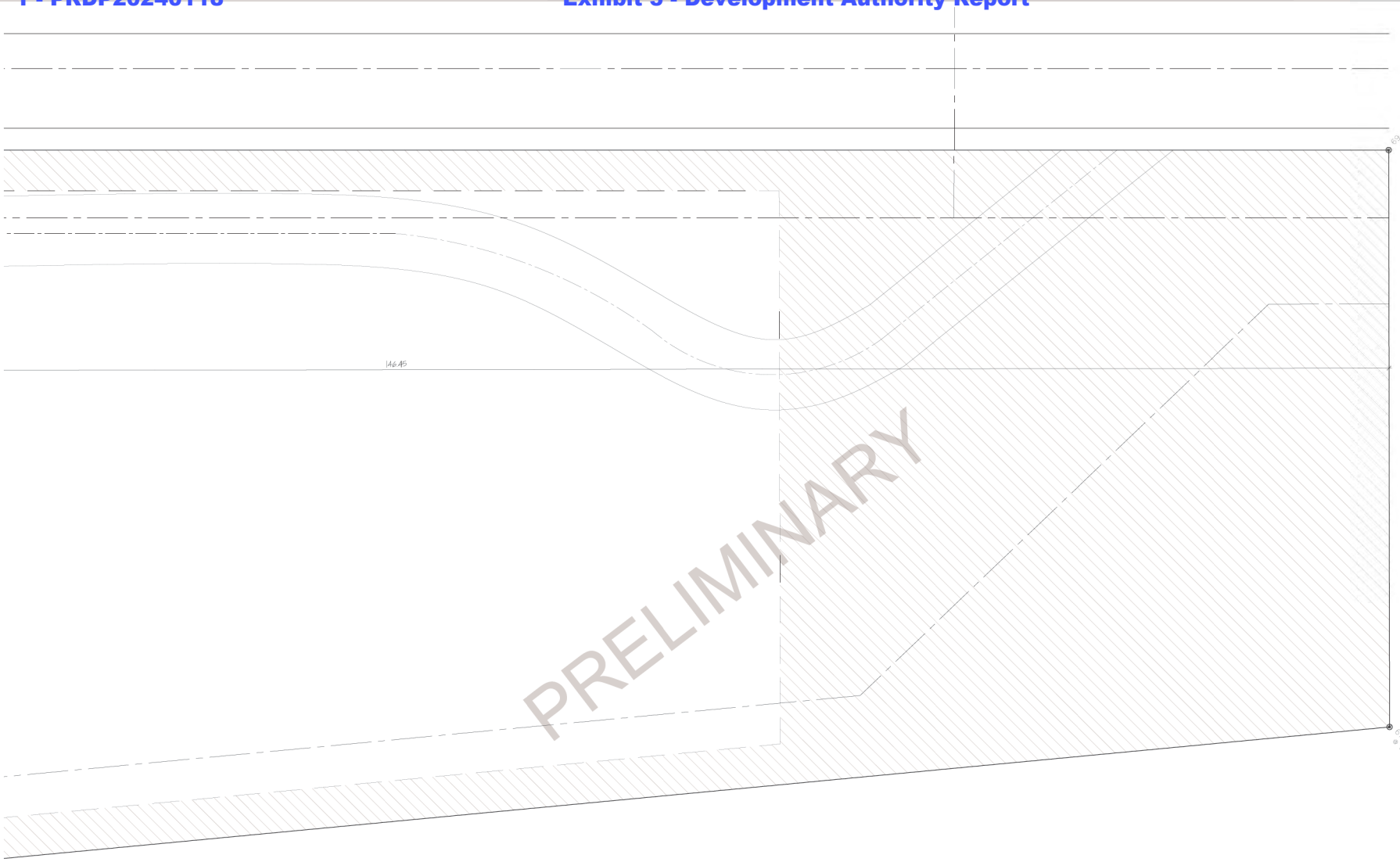
BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	40 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1456 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

DRAWING TITLE:

KEY PLAN

SCALE: 1:400
DATE: FEB 2, 2024

SHEET: A1.1



DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3E 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLIFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

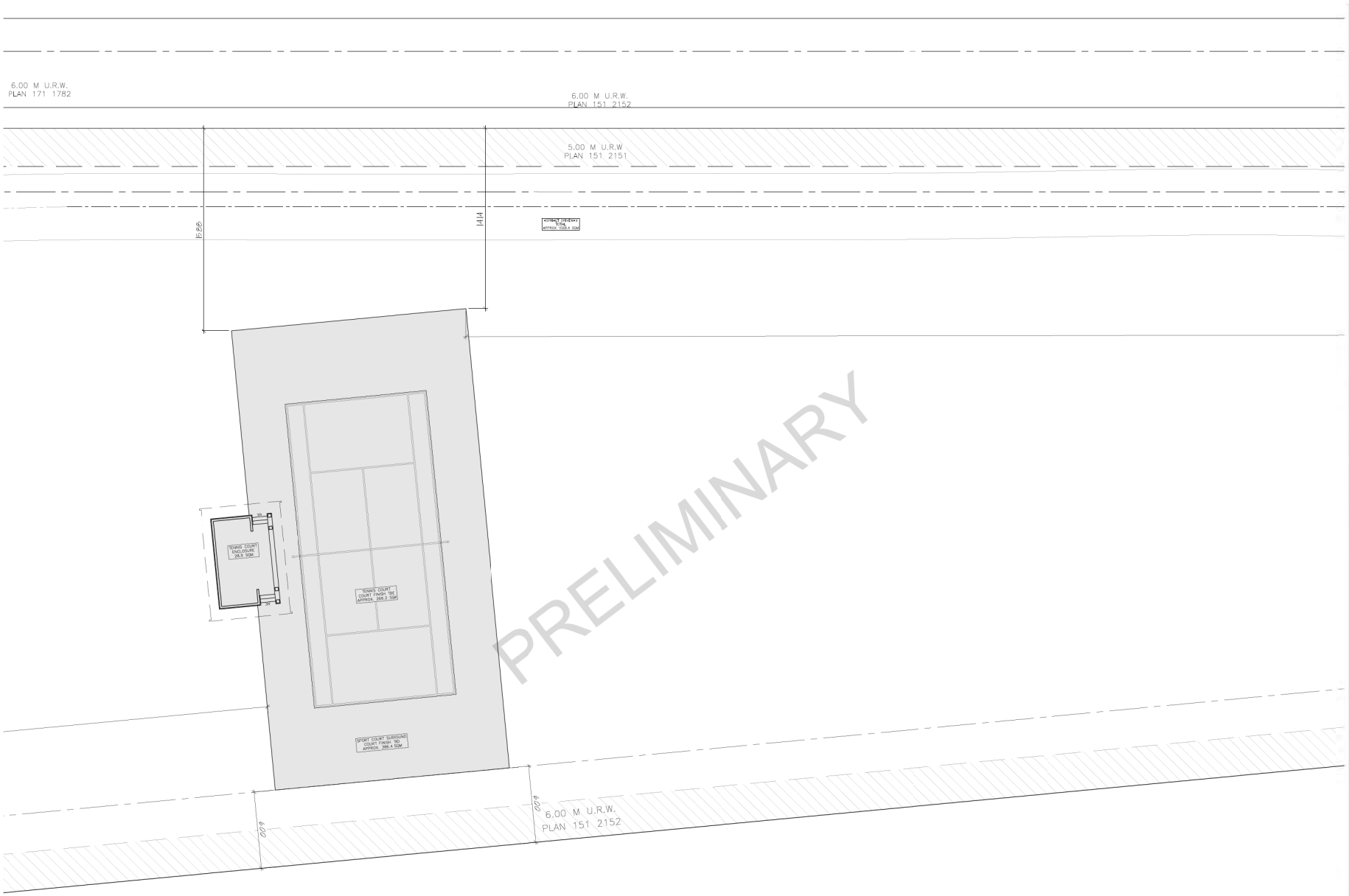
BUILDING 1	
ATTACHED GARAGE AREA	1095 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4529 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1456 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

DRAWING TITLE:

SITE PLAN
SECTION 1

SCALE: 1:100
DATE: FEB 2, 2024

SHEET: A1.2



DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	40 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1456 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	130 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

DRAWING TITLE:

SITE PLAN
SECTION 2

SCALE: 1:100
DATE: FEB 2, 2024

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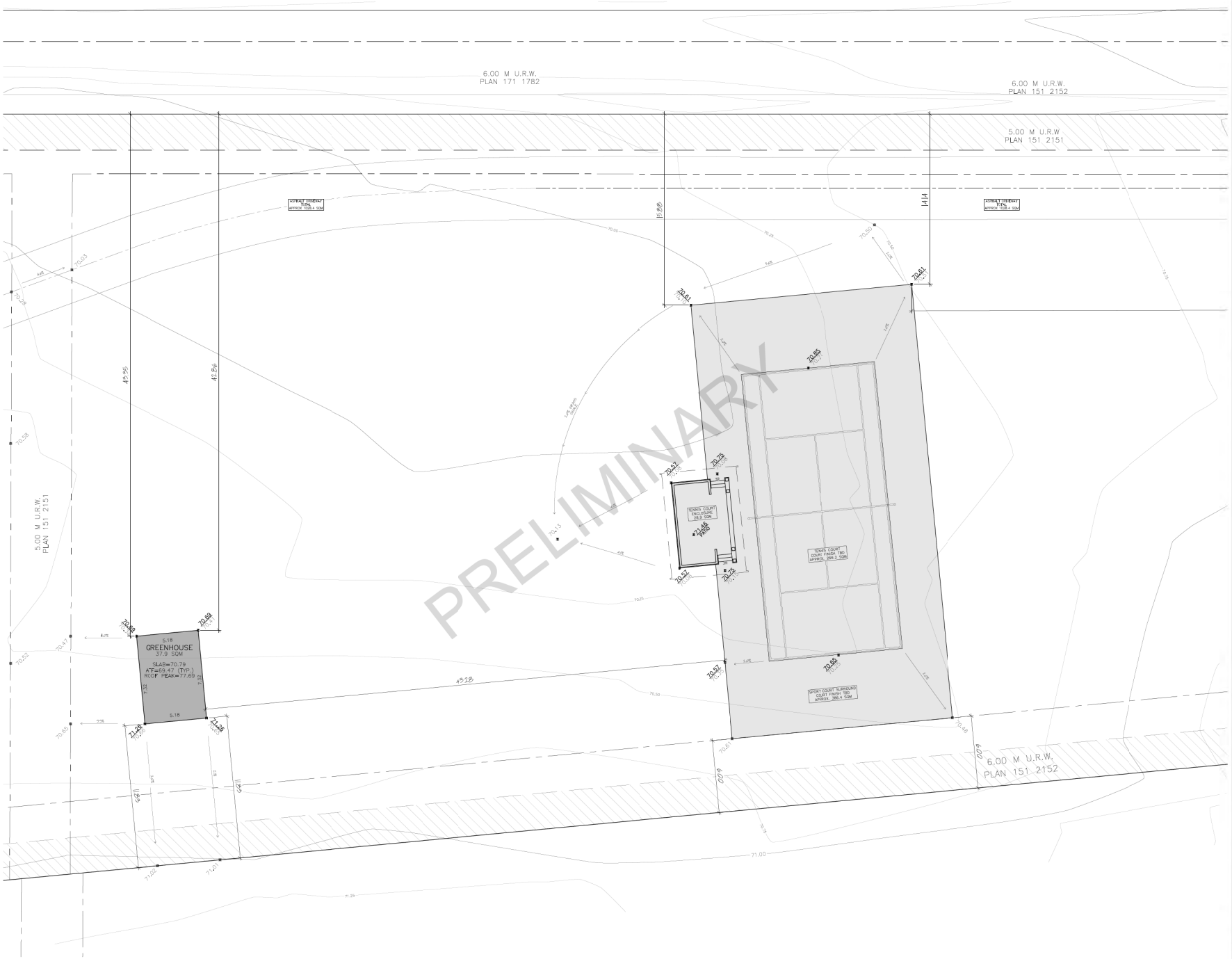

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	40 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT.

DRAWING TITLE:

SITE PLAN
SECTION 3

SCALE: 1:100
DATE: FEB 2, 2024

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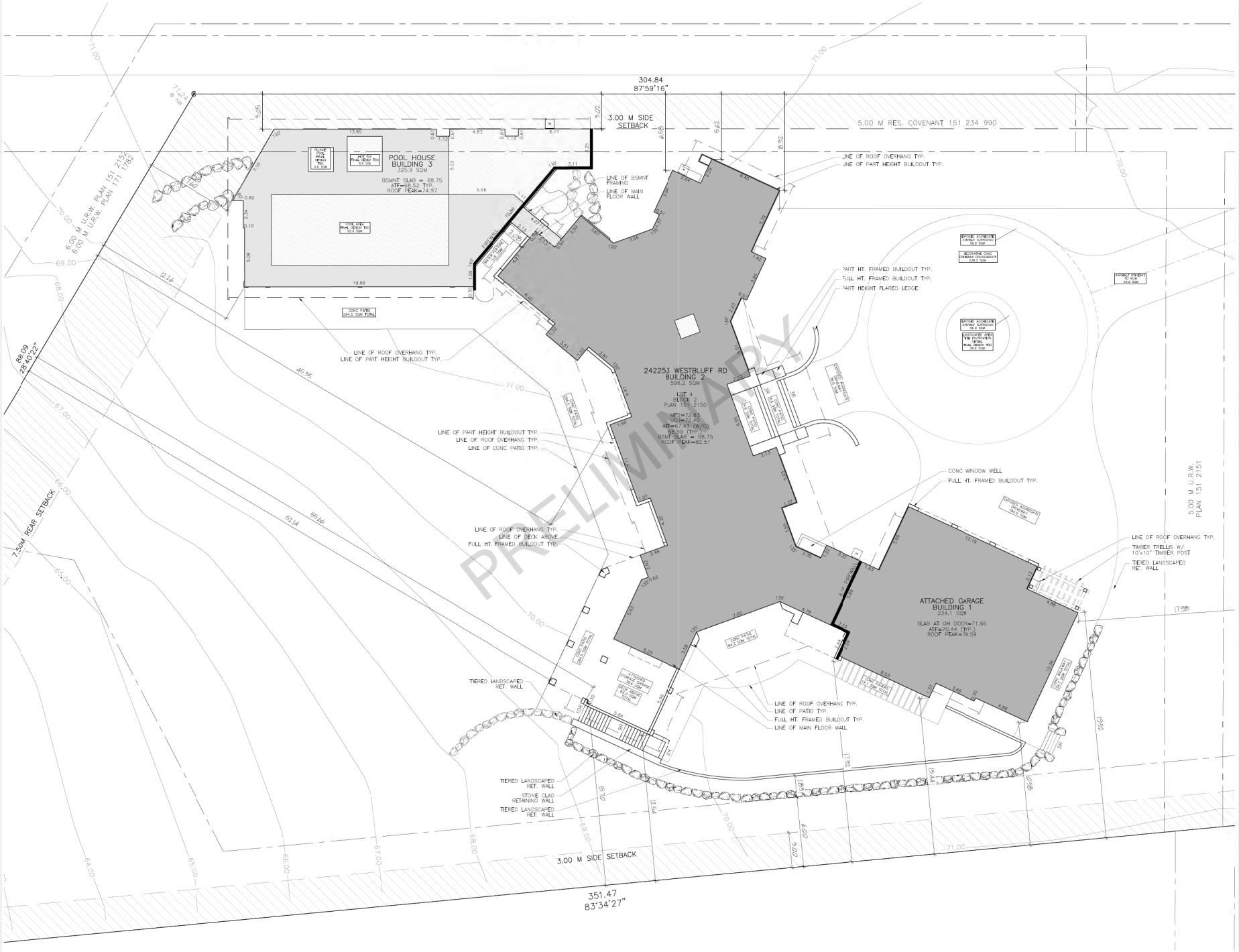


DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

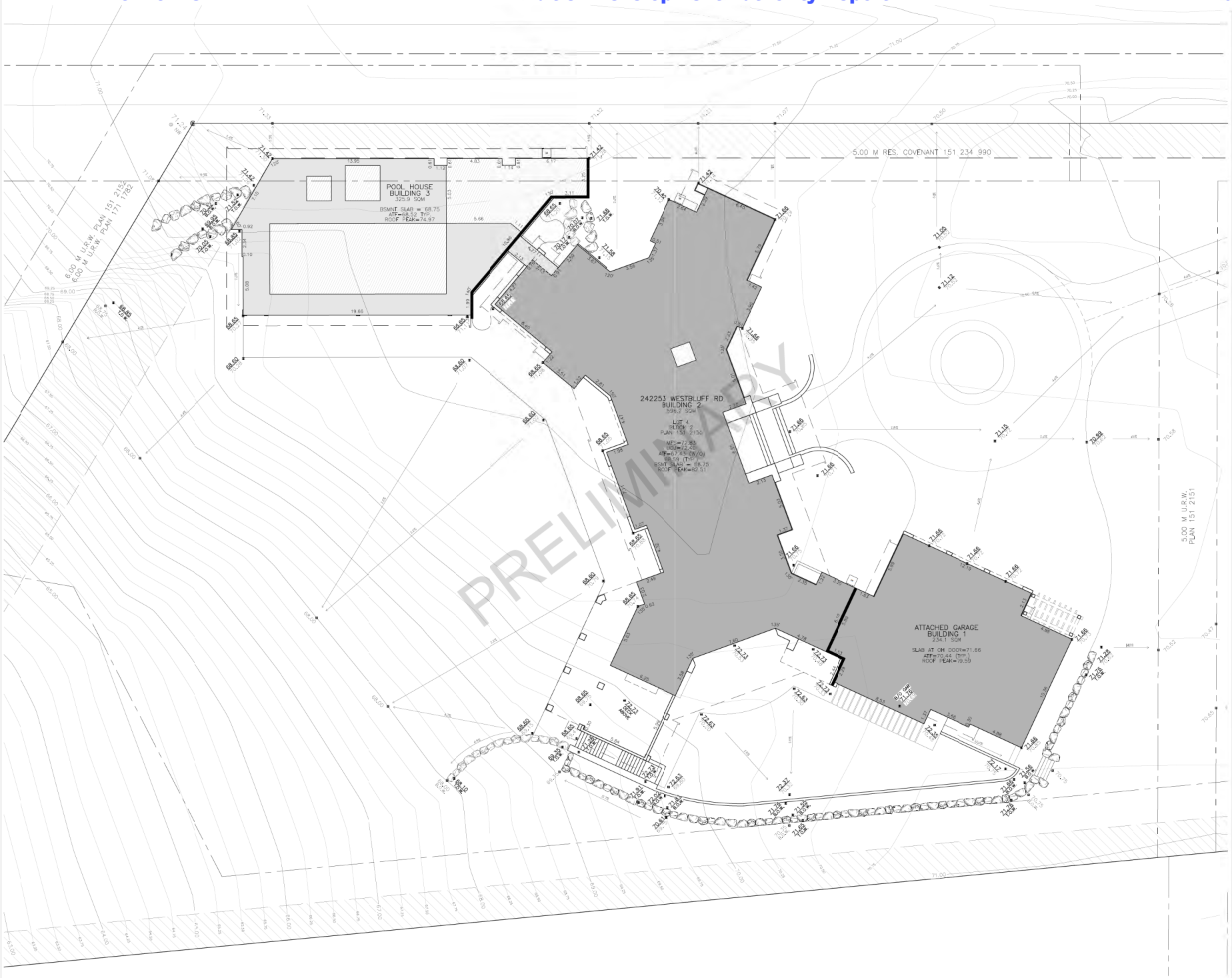
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	465 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	130 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT.

DRAWING TITLE:
SITE PLAN
SECTION 4

SCALE: 1:100
DATE: FEB 2, 2024

SHEET: A1.5



DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
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DRAWN BY: RC,CW,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	465 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1456 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	130 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

DRAWING TITLE:

GRADING PLAN SECTION 4

SCALE: 1:400
DATE: FEB 2, 2024

SHEET: A1.6

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	40 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1406 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

DRAWING TITLE:
SITE PLAN
SECTION 5

SCALE: 1:100
DATE: FEB 2, 2024

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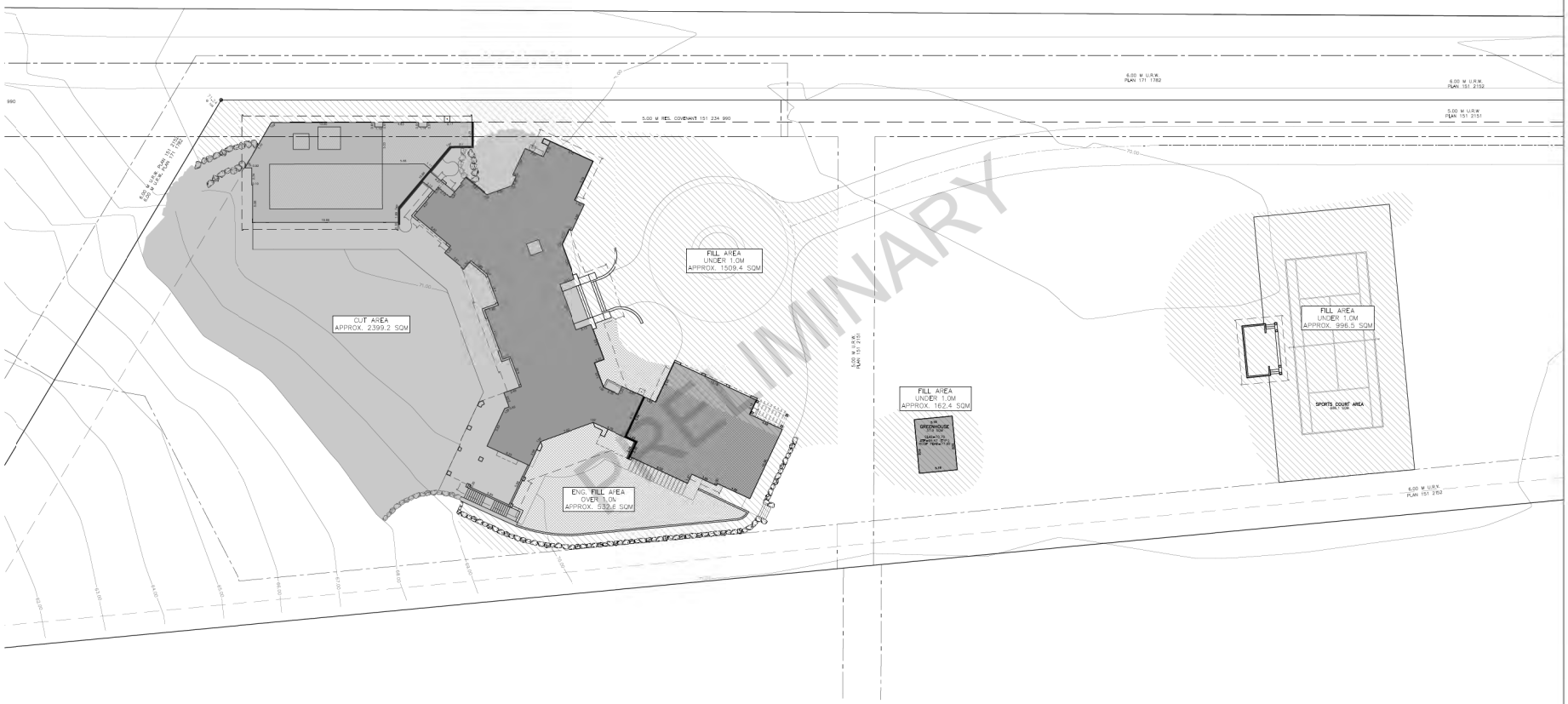


DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,BP

FLOOR AREAS:

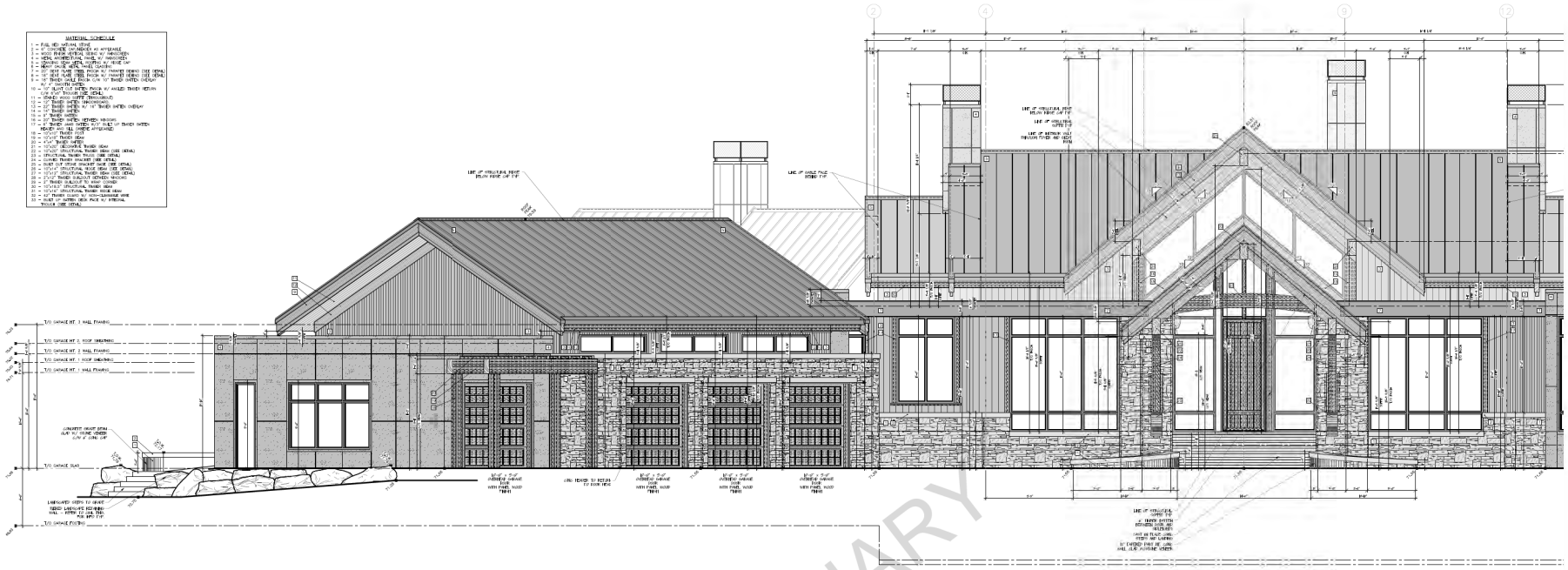
BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	480 SQ.FT.
MECHANICAL AREA	40 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	1456 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9047 SQ.FT

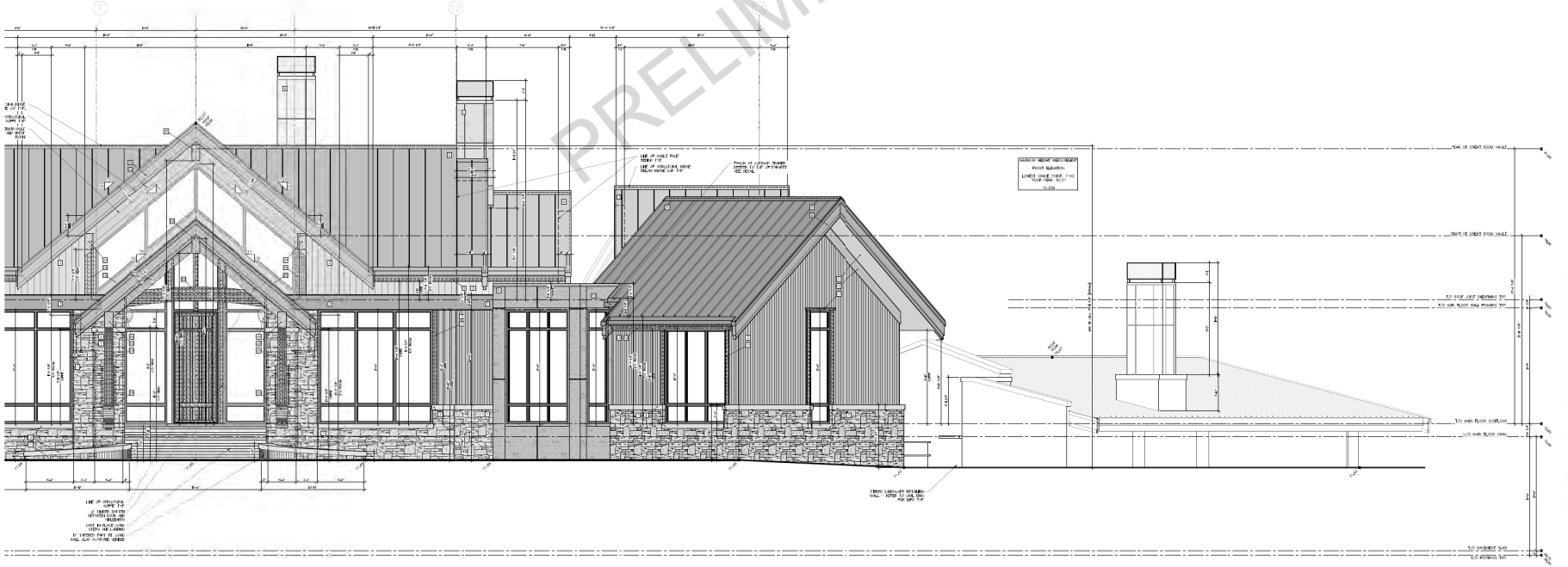
DRAWING TITLE:

CUT AND FILL PLAN

SCALE: 1:400
DATE: FEB 2, 2024

SHEET: A1.8





DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

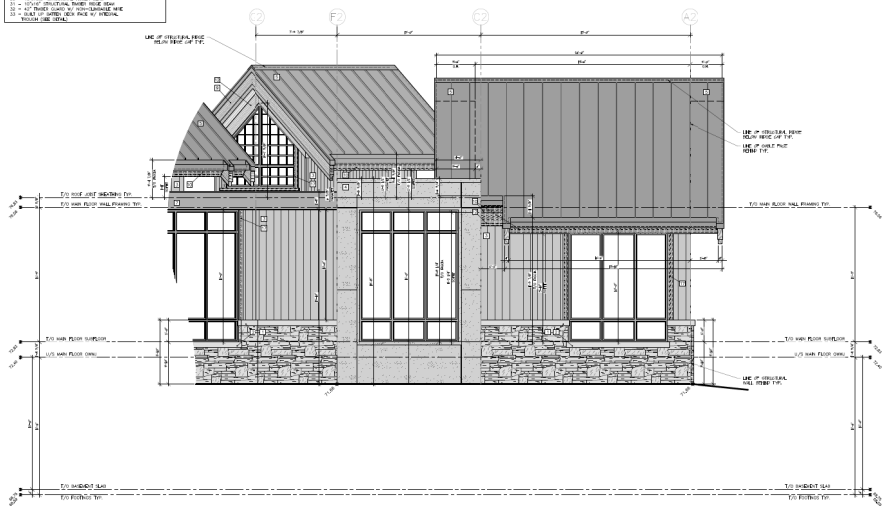
BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	480 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MEDVISTORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MEDVISTORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

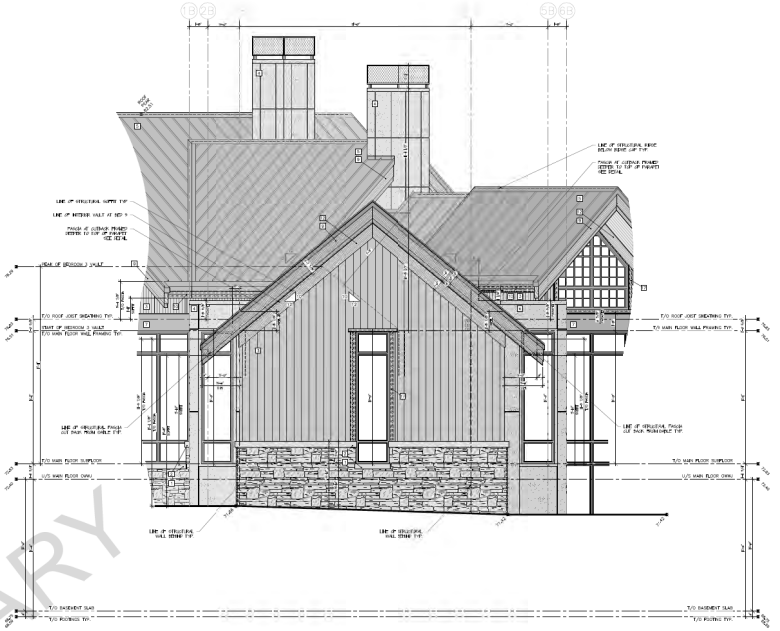
DRAWING TITLE:

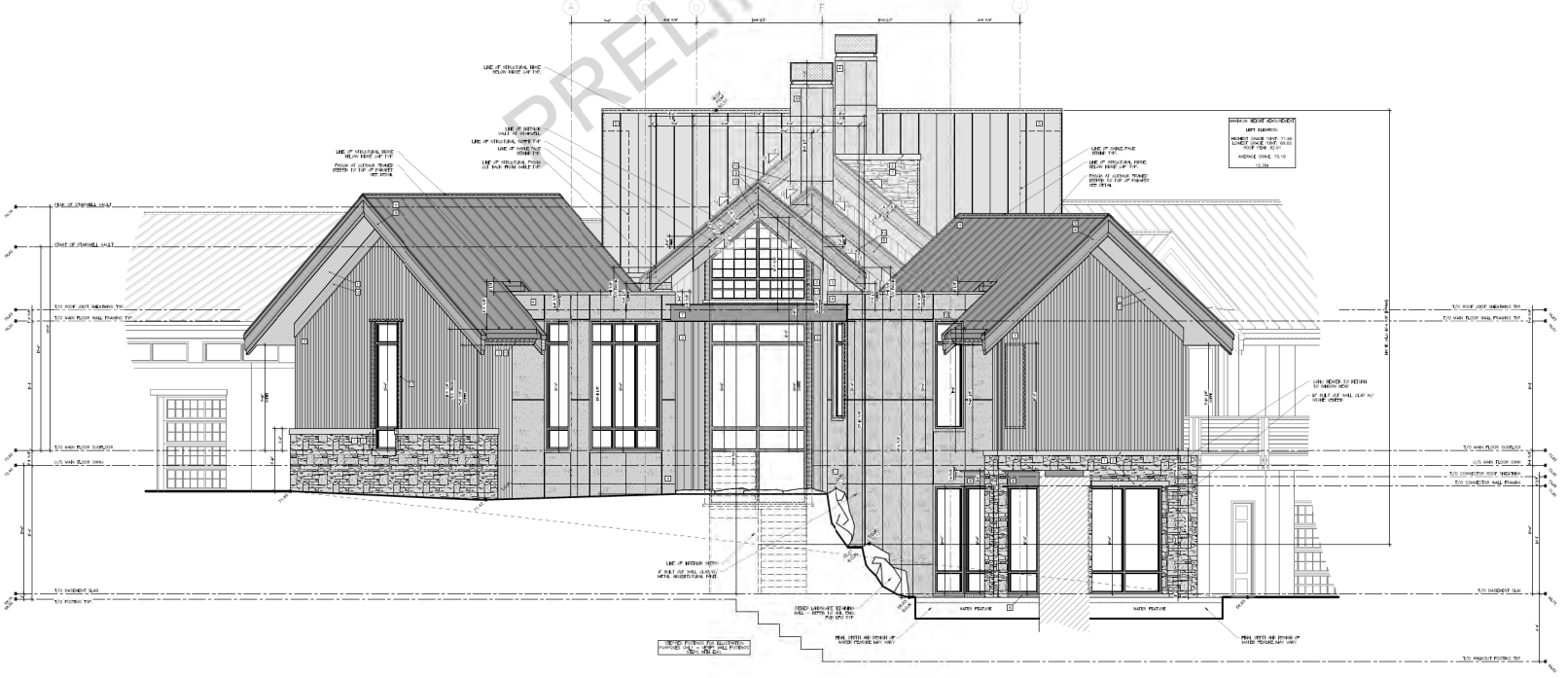
ELEVATIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A2.1







PRELIMINARY

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

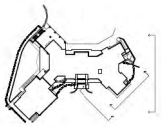
242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP



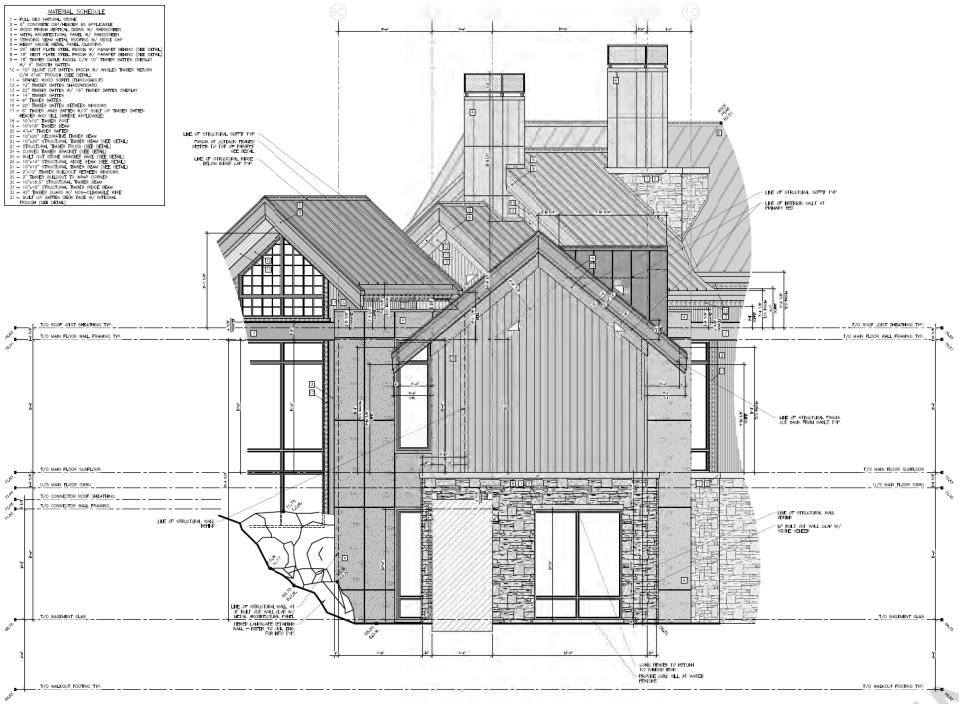
FLOOR AREAS:

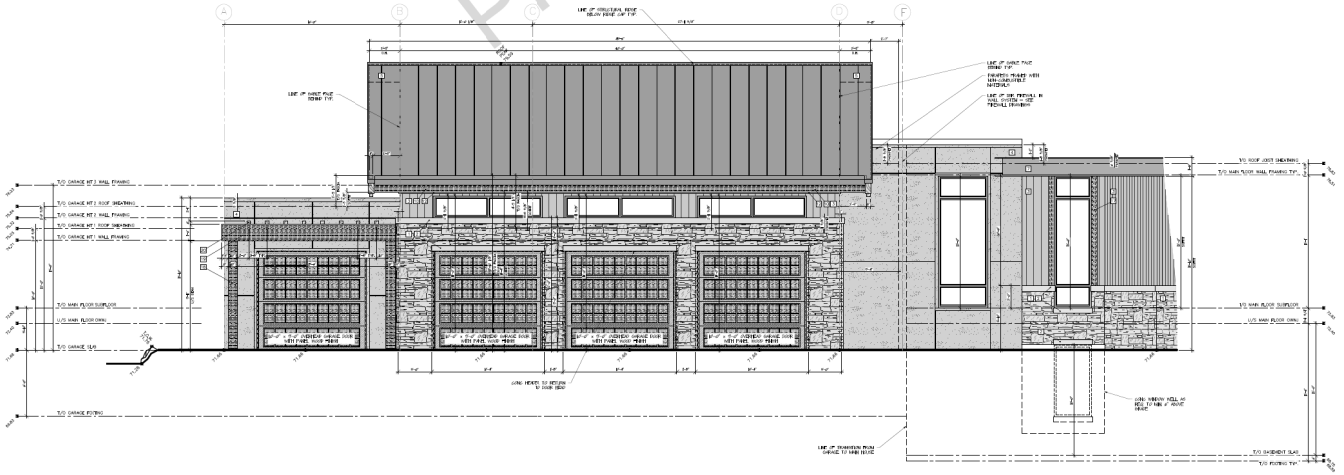
BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	1821 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
ELEVATIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A2.2





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FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4026 SQ.FT.
MECHANICAL/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECHANICAL/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

ELEVATIONS

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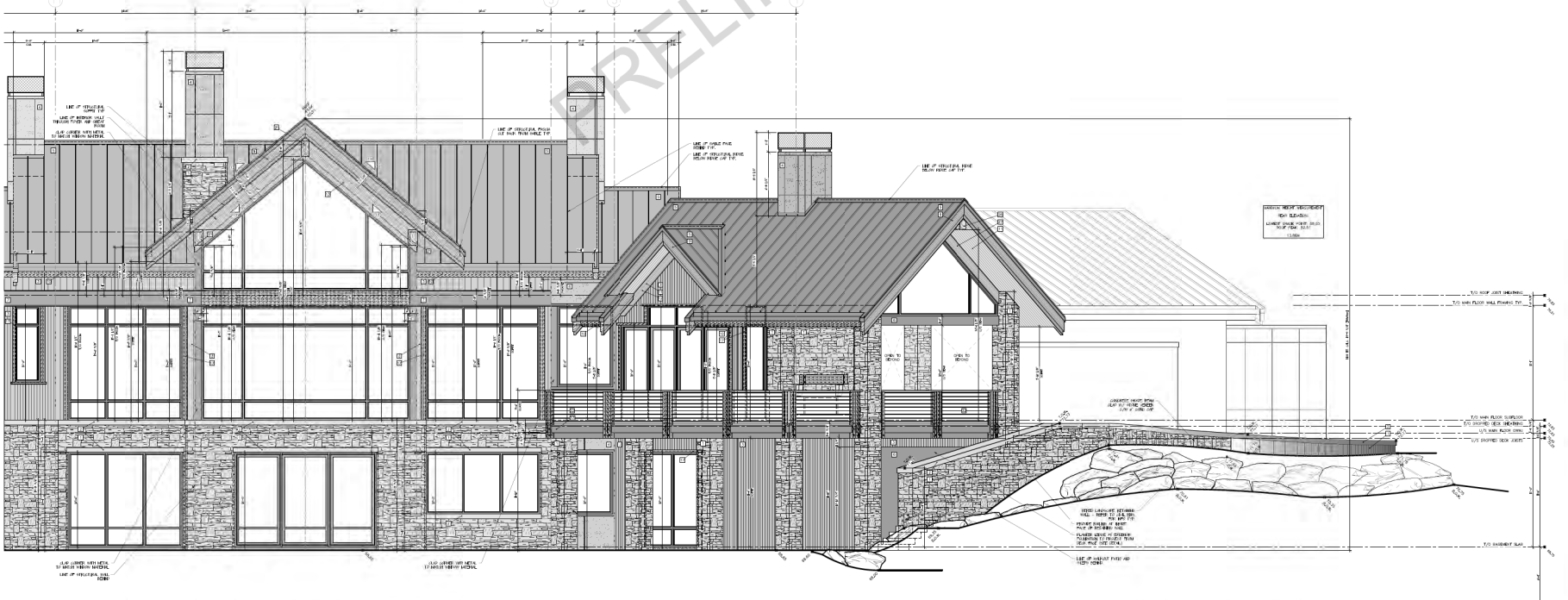
SHEET: A2.3



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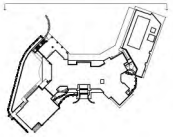

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1095 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6028 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	1021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

ELEVATIONS

SCALE: 1/4"= 1'-0"
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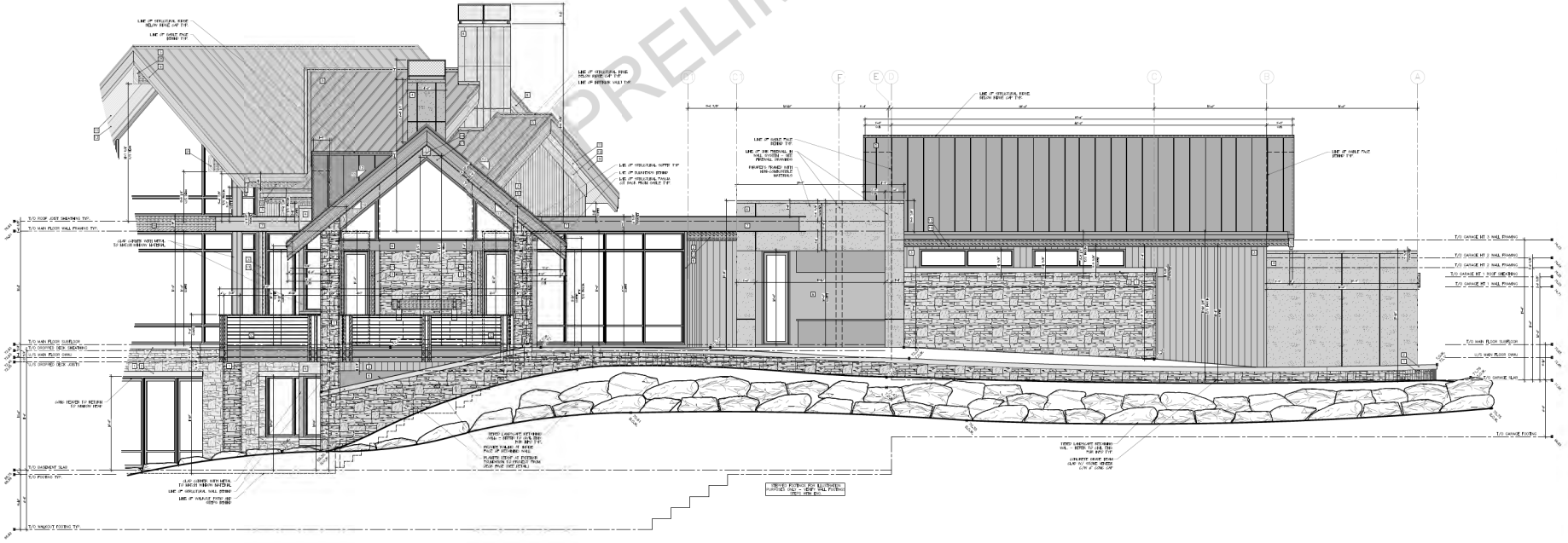
SHEET: A2.4

MATERIAL SCHEDULE

1 = FULL RED MASONRY STONE
2 = 6" CONCRETE OR MASONRY AS APPLICABLE
3 = WOOD FINISH VERTICAL SIDING W/ EMBOSSTEEN
4 = HORIZONTAL WOOD SIDING W/ EMBOSSTEEN
5 = PREFINISHED METAL FLASHING TO MATCH ADJ. SURFACE
6 = HEAVY GAUGE METAL TRAVEL LOUVERS
7 = 24" WIDE FLARE STEEL FASCIA W/ PAINTED FINISH (SEE DETAIL
8 = 18" WIDE FLARE STEEL FASCIA W/ PAINTED FINISH (SEE DETAIL
9 = 12" WIDE FLARE STEEL FASCIA C/W 10" TIMBER RAFTER OVERHAT W/ 2" SMOOTH RAFTER
10 = 10" FLAT CUT RAFTER FASCIA W/ ANGLED TIMBER RETURN
11 = 10"x10" TIMBER POST
12 = STAINED WOOD COFFER (SMOOTHCUT)
13 = 12" TIMBER RAFTER (SMOOTHCUT)
14 = 10" TIMBER RAFTER C/W 1" 1X TIMBER RAFTER OVERLAY
15 = 8" TIMBER RAFTER
16 = 3" TIMBER RAFTER
17 = 20" TIMBER RAFTER (STAINED) WINDOWS
18 = TIMBER BEAM RAFTER W/ FLAT 2" TIMBER RAFTER MEMBERS TILL BEAM AFTERWARDS
19 = 10"x10" TIMBER POST
20 = 10"x12" TIMBER BEAM
21 = 10"x10" RECTANGULAR TIMBER BEAM
22 = 10"x10" STRUCTURAL TIMBER BEAM (SEE DETAIL)
23 = 10"x12" STRUCTURAL TIMBER BEAM (SEE DETAIL)
24 = TAPERED TIMBER BEAM (SEE DETAIL)
25 = INSET CUT STONE BRACKET (SEE DETAIL)
26 = 10"x14" STRUCTURAL TIMBER BEAM (SEE DETAIL)
27 = 10"x12" STRUCTURAL TIMBER BEAM (SEE DETAIL)
28 = 10"x10" STRUCTURAL TIMBER BEAM (SEE DETAIL)
29 = 2" TIMBER SLOUCH TO MATCH EXISTING
30 = 10"x10" STRUCTURAL TIMBER BEAM
31 = 10"x10" STRUCTURAL TIMBER BEAM (SEE DETAIL)
32 = 42" TIMBER GUARD W/ MESH-GUARDRAIL INFILL
33 = INSET CUT STONE BRICK FACE W/ MATERIAL FINISH (SEE DETAIL)



DEANTHOMAS
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McKINLEY MASTERS
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544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

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242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

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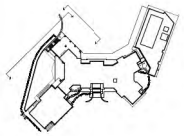
1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP



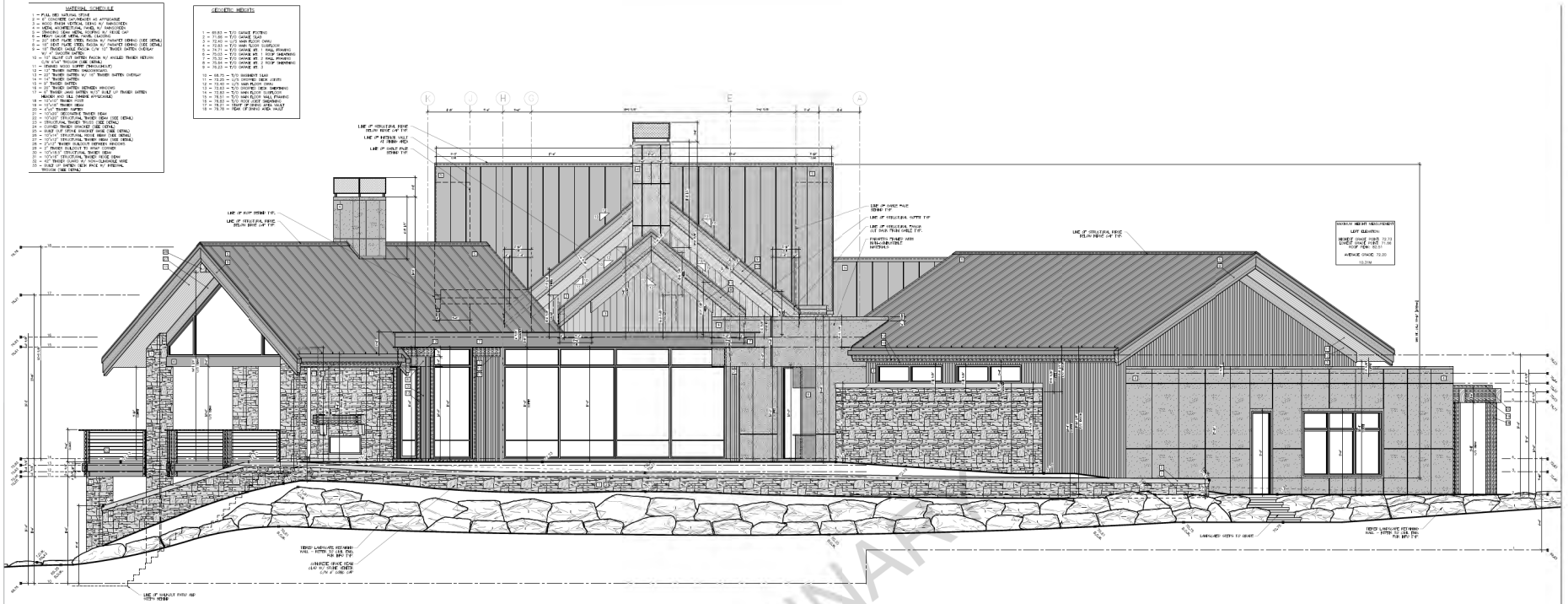
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6028 SQ.FT.
MEDIVSTORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9221 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MEDI-VSTORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
ELEVATIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A2.5



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FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
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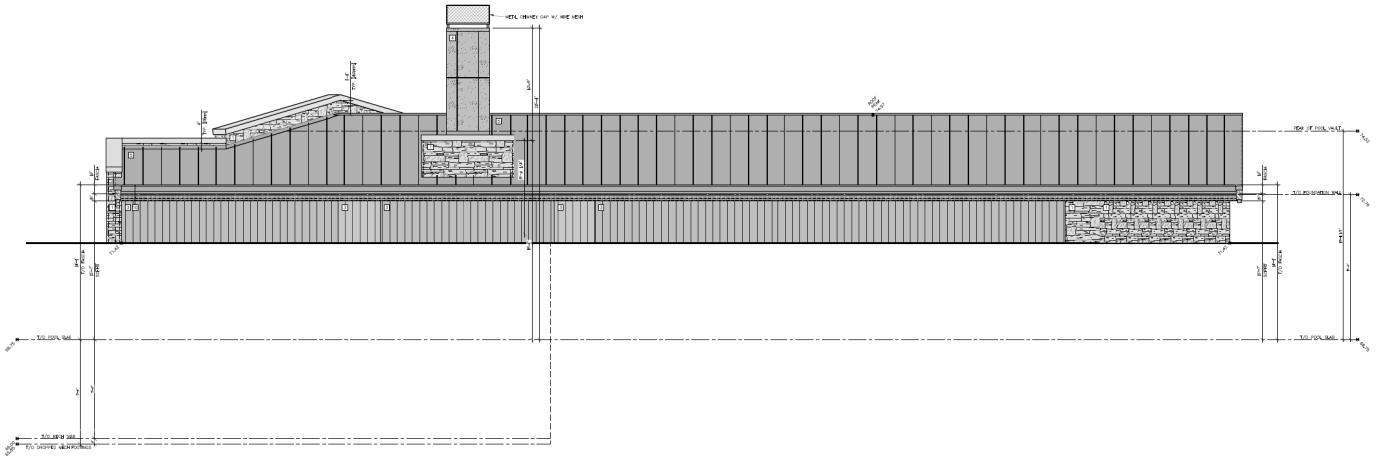
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	1021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

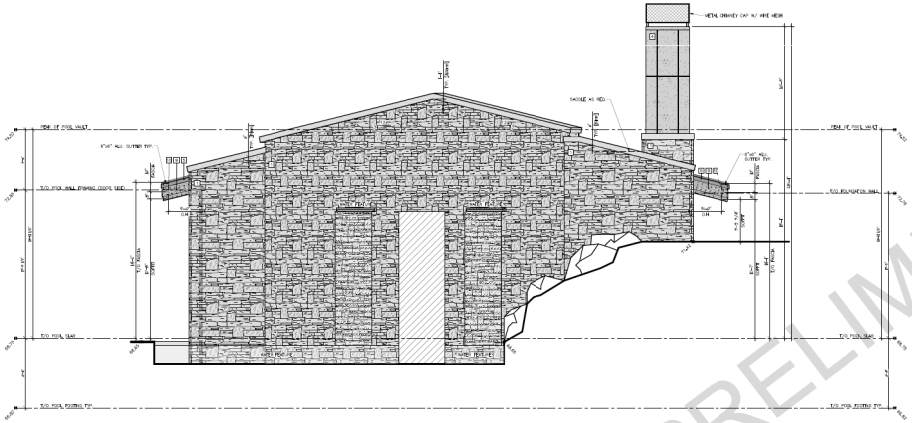
DRAWING TITLE:

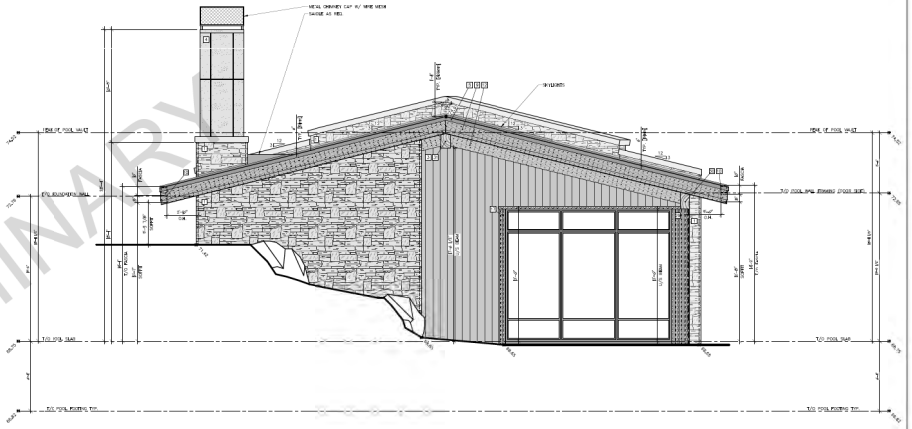
ELEVATIONS

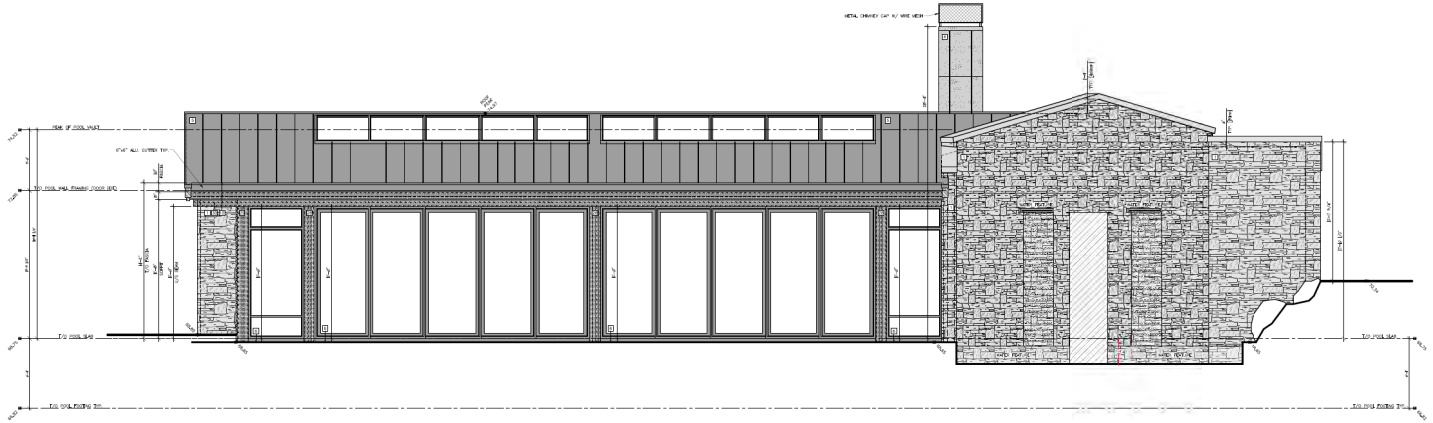
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A2.6









DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
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DRAWN BY: RC,CW,WM,BP

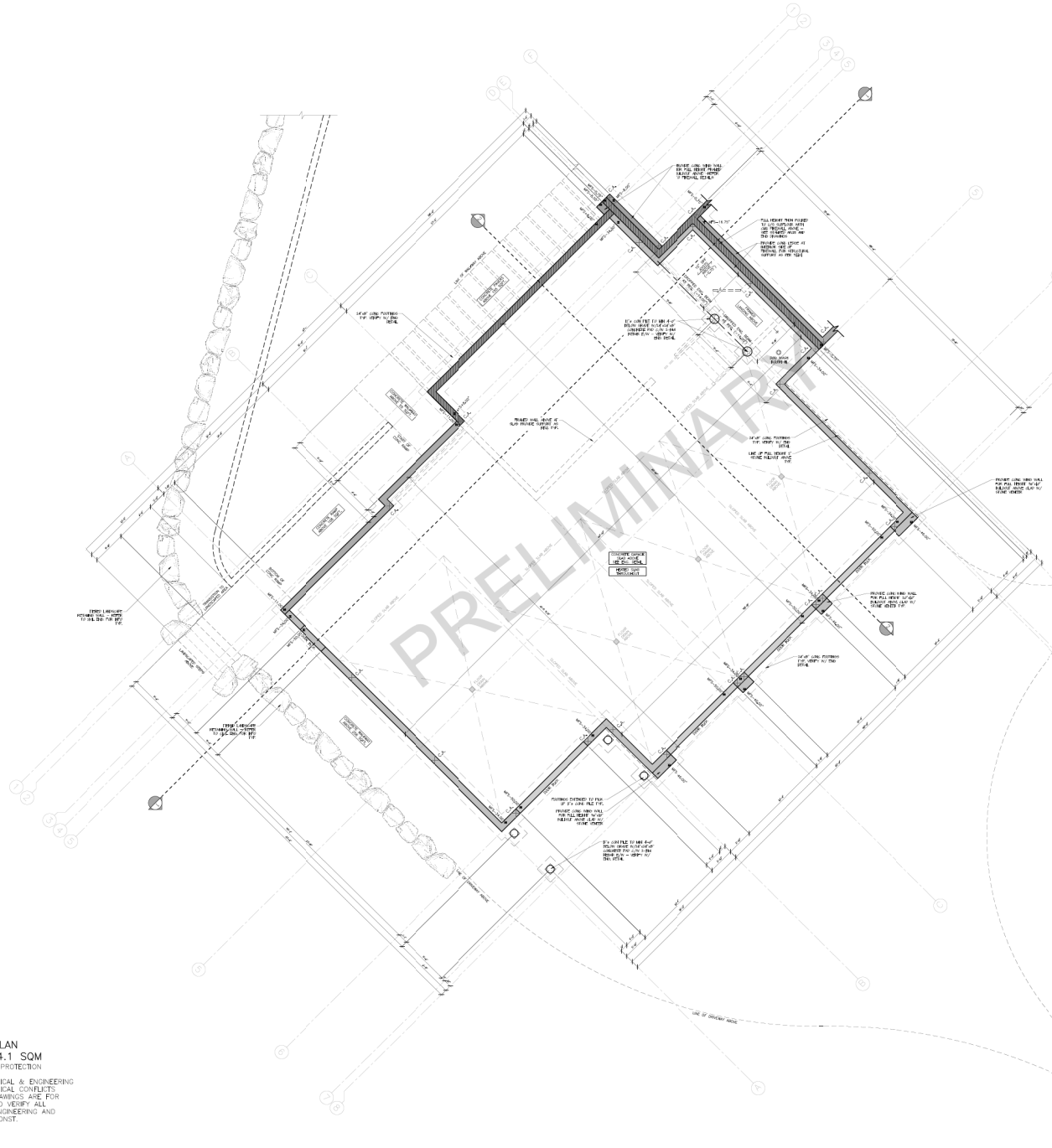
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4628 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
ELEVATIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A2.7



BUILDING 1
FOUNDATION PLAN
BUILDING AREA 234.1 SQM
MIN. 4'-0" FOOTING FROST PROTECTION

SITE COORD: FOOTINGS WITH MECHANICAL & ENGINEERING AS REQUIRED TO AVOID MECHANICAL CONFLICTS. FOOTINGS SHOWN ON DESIGN DRAWINGS ARE FOR REFERENCE ONLY. BUILDER TO VERIFY ALL FOOTING REQUIREMENTS WITH ENGINEERING AND LAYOUTS PRIOR TO CONST.

DEANTHOMAS
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403 | 719 | 6641
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FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
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MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
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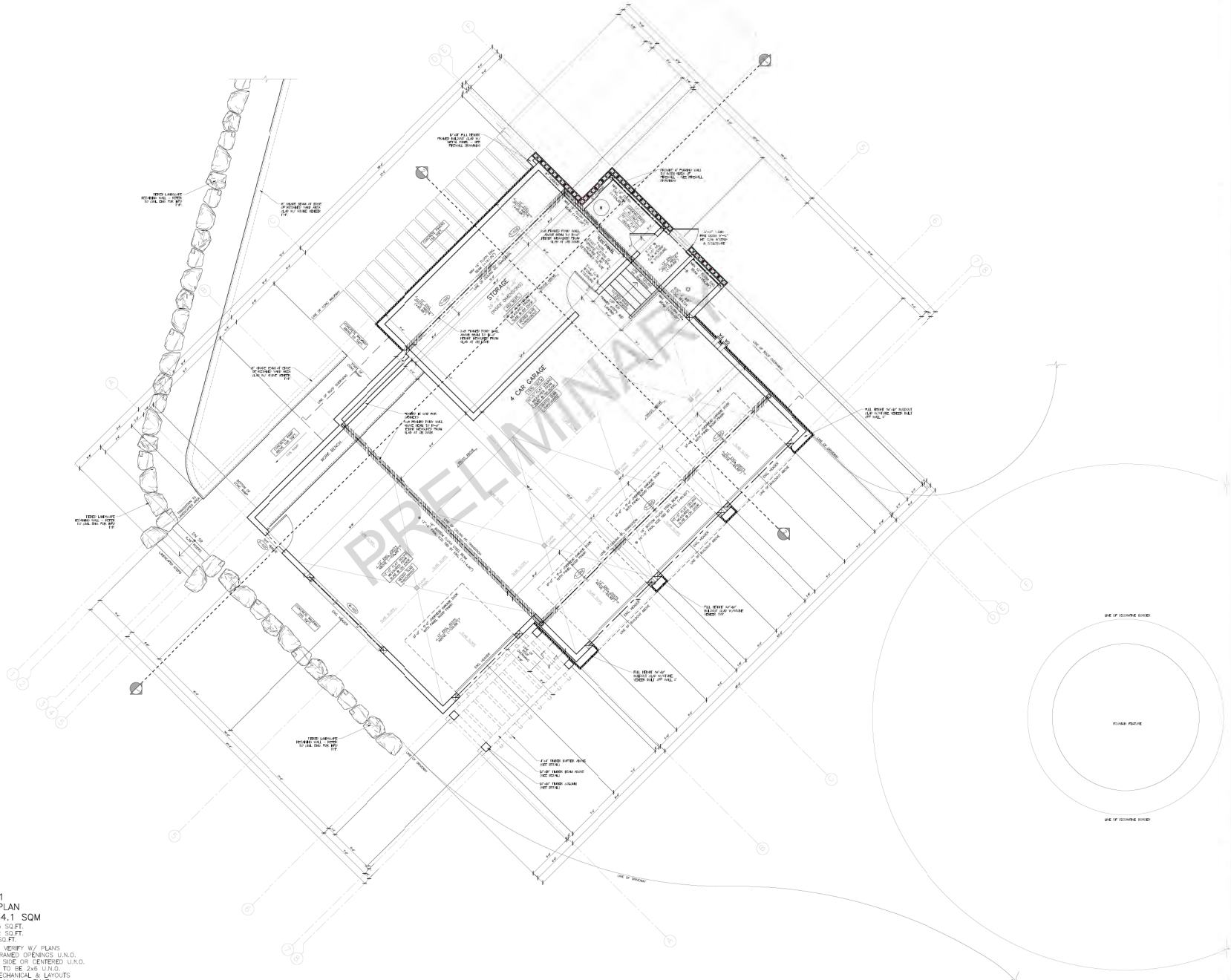
DRAWING TITLE:
BUILDING 1
FOUNDATION PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.1



BUILDING 1
MAIN FLOOR PLAN
BUILDING AREA 234.1 SQM
GARAGE AREA – 1935 SQ.FT.
STORAGE AREA – 462 SQ.FT.
MECH. AREA – 45 SQ.FT.

WALL HT. VARIES BY LOCATION – VERIFY W/ PLANS
9'-0" HT. DOORS U.N.O./9'-0" HT. FRAMED OPENINGS U.N.O.
ALL DOORS TO HAVE 6" JAMB ON HINGE SIDE OR CENTERED U.N.O.
ALL MAIN FLOOR INTERIOR WALLS TO BE 2x6 U.N.O.
SITE COORD. JOIST SPACING WITH MECHANICAL & LAYOUTS
AS REQUIRED TO AVOID MECHANICAL CONFLICTS
NO PLUMBING IN EXTERIOR WALLS

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FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4026 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
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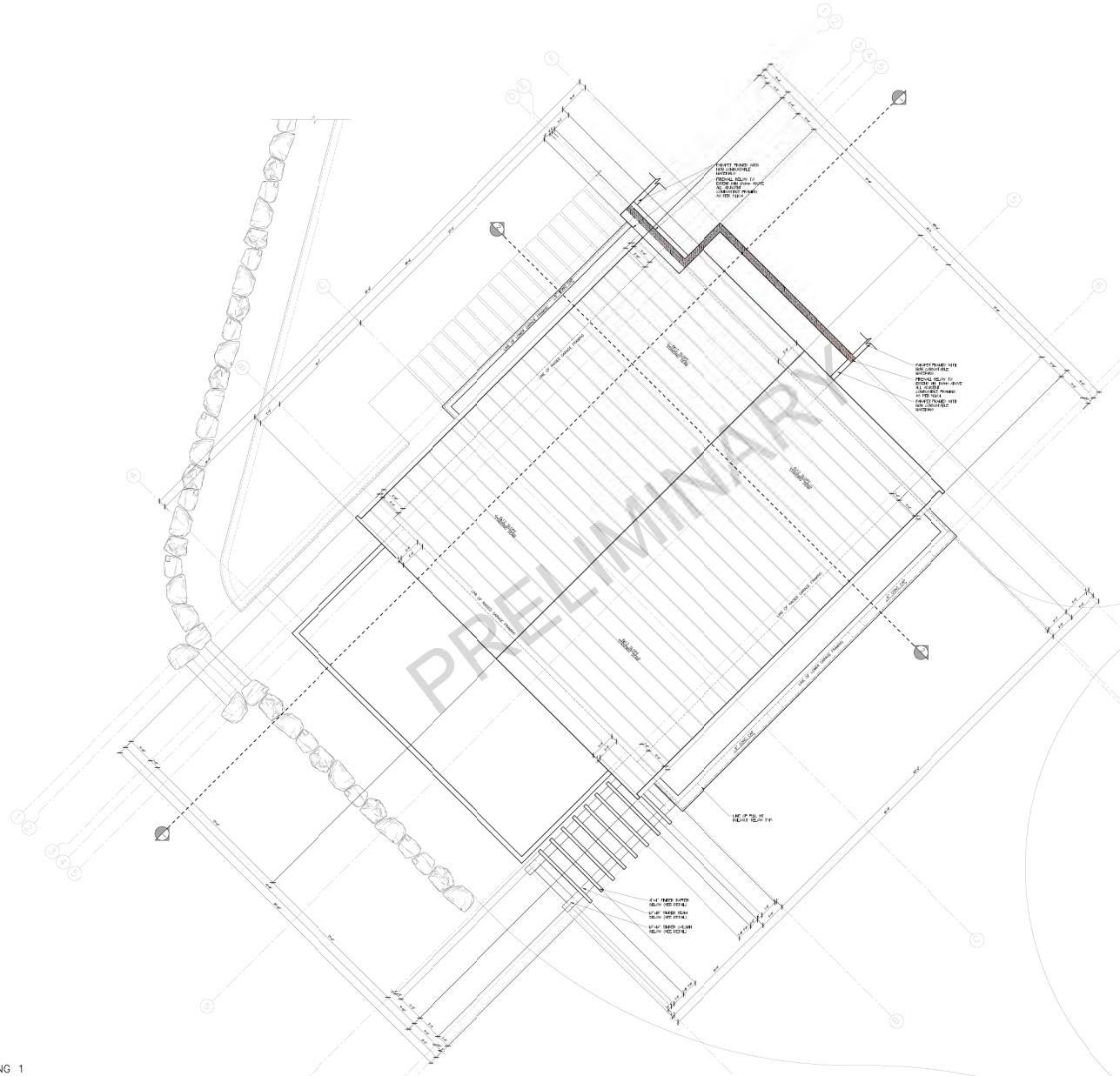
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 1
MAIN FLOOR PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.2



BUILDING 1
ROOF PLAN
BUILDING AREA 234.1 SQM

SADDLE THE UP SLOPE SIDE OF ALL FLAT PROJECTIONS AND VALLEYS.
ALL SADDLES SHALL BE INSTALLED WITH A FINISHED SLOPE OF MIN 2%
NORMAL ASPHALT SHINGLES MIN SLOPE = 4:12
LOW SLOPE ASPHALT SHINGLES MIN SLOPE = 2:12
MODIFIED BITUMINOUS MEMBRANE (TORCH ON) MIN SLOPE = 2%
PROFILED METAL ROOFING MIN SLOPE = 3:12 UNLESS OTHERWISE
APPROVED BY MANUFACTURER'S WRITTEN INSTRUCTIONS

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MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
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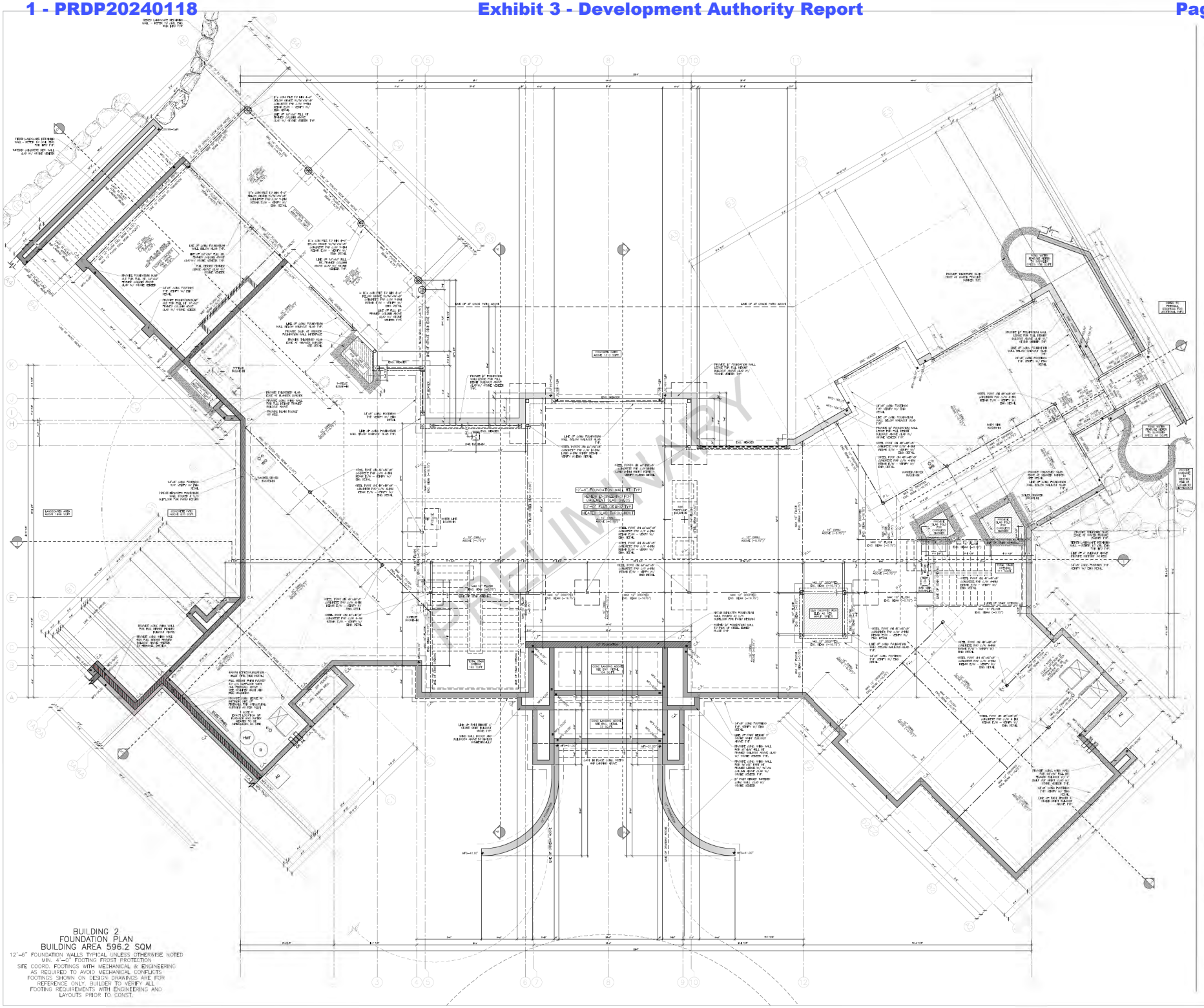
DRAWING TITLE:

BUILDING 1
ROOF PLAN

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A3.3



BUILDING 2
FOUNDATION PLAN
BUILDING AREA 596.2 SQM
12'-6" FOUNDATION WALLS TYPICAL UNLESS OTHERWISE NOTED
MIN. 4'-0" FOOTING FROST PROTECTION
SITE COORD. FOOTINGS WITH MECHANICAL & ENGINEERING AS REQUIRED TO AVOID MECHANICAL CONFLICTS
FOOTINGS SHOWN ON DESIGN DRAWINGS ARE FOR REFERENCE ONLY. BUILDER TO VERIFY ALL FOOTING REQUIREMENTS WITH ENGINEERING AND LAYOUTS PRIOR TO CONST.

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

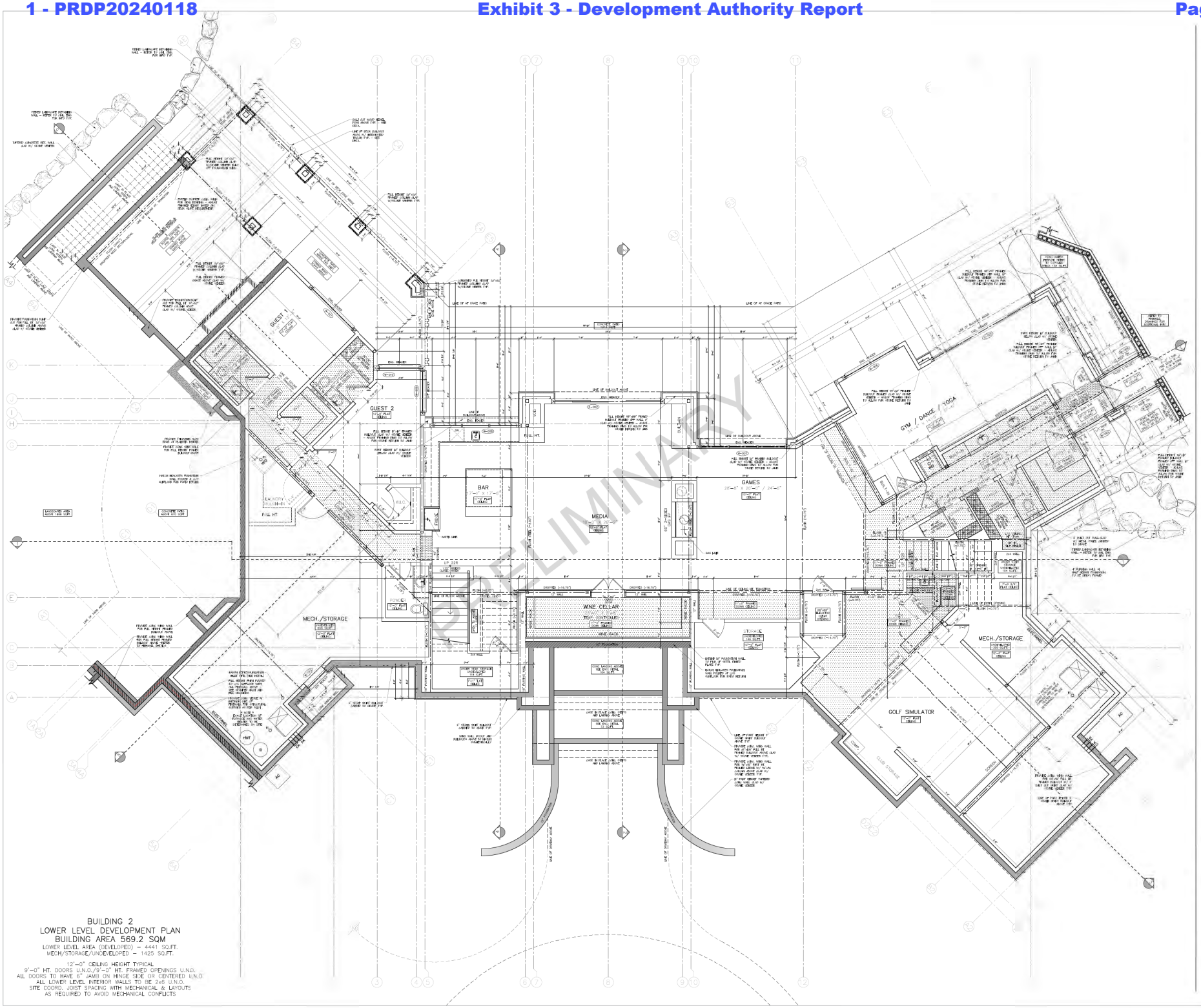
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 2
FOUNDATION PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.4



BUILDING 2
LOWER LEVEL DEVELOPMENT PLAN
BUILDING AREA 569.2 SQM
LOWER LEVEL AREA (DEVELOPED) – 4441 SQ.FT.
MECH./STORAGE/UNDEVELOPED – 1425 SQ.FT.

12'-0" CEILING HEIGHT TYPICAL
9'-0" HT. DOORS U.N.O./9'-0" HT. FRAMED OPENINGS U.N.O.
ALL DOORS TO HAVE 4" JAMB ON HINGE SIDE OR CENTERED U.N.O.
ALL LOWER LEVEL INTERIOR WALLS TO BE 2x6 U.N.O.
SITE COORD. JOIST SPACING WITH MECHANICAL & LAYOUTS
AS REQUIRED TO AVOID MECHANICAL CONFLICTS

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

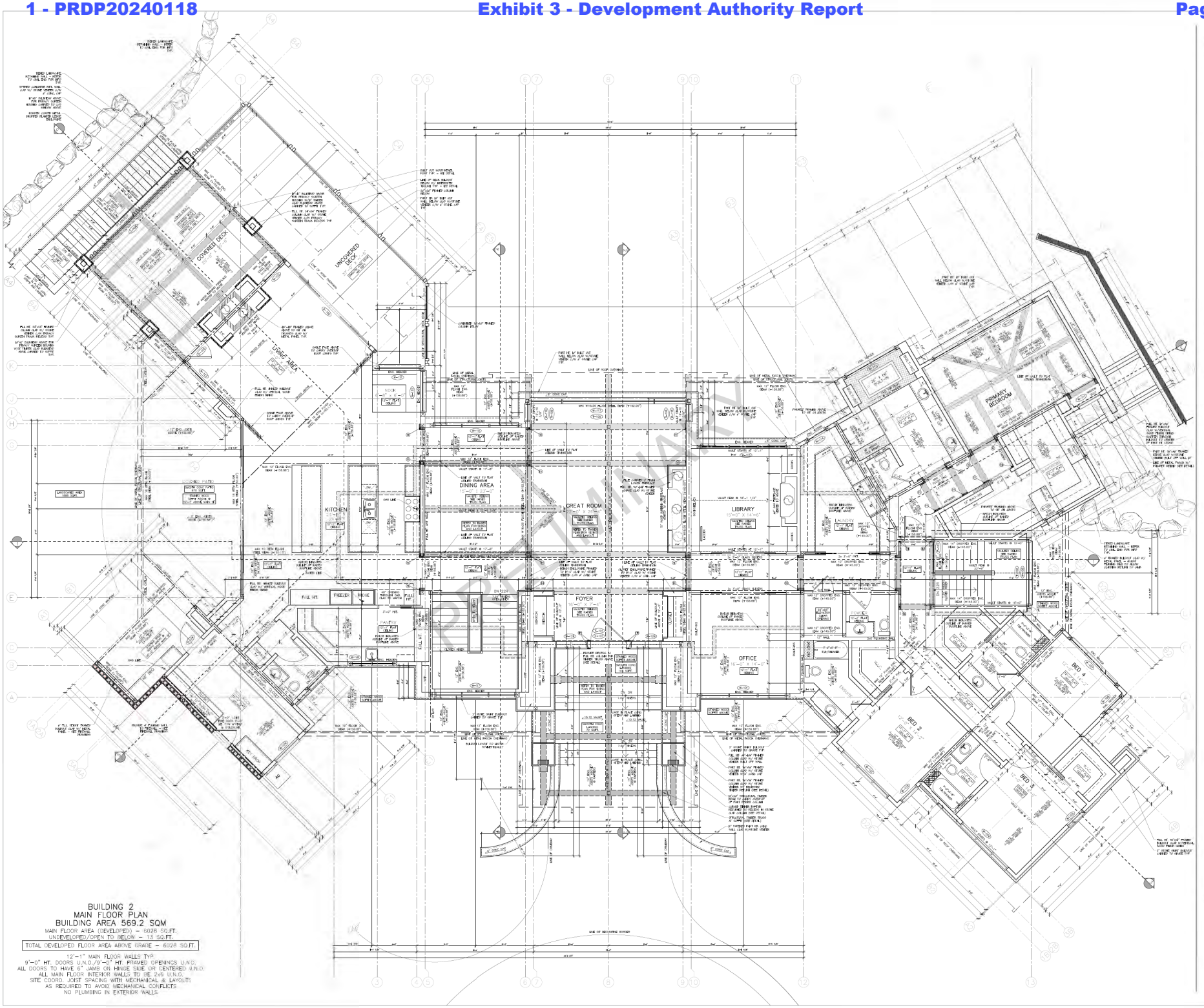
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4528 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 2
LOWER LEVEL DEV PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.5



BUILDING 2
MAIN FLOOR PLAN
BUILDING AREA 569.2 SQM
MAIN FLOOR AREA (DEVELOPED) – 6028 SQ.FT.
UNDEVELOPED/OPEN TO BELOW – 13 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE – 6028 SQ.FT.

12'-1" MAIN FLOOR WALLS TYP.
9'-0" HT. DOORS U.N.O./9'-0" HT. FRAMED OPENINGS U.N.O.
ALL DOORS TO HAVE 6" JAMB ON HINGE SIDE OR CENTERED U.N.O.
ALL MAIN FLOOR INTERIOR WALLS TO BE 2x6 U.N.O.
SITE COORD. JOIST SPACING WITH MECHANICAL & LAYOUTS AS REQUIRED TO AVOID MECHANICAL CONFLICTS
NO PLUMBING IN EXTERIOR WALLS

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

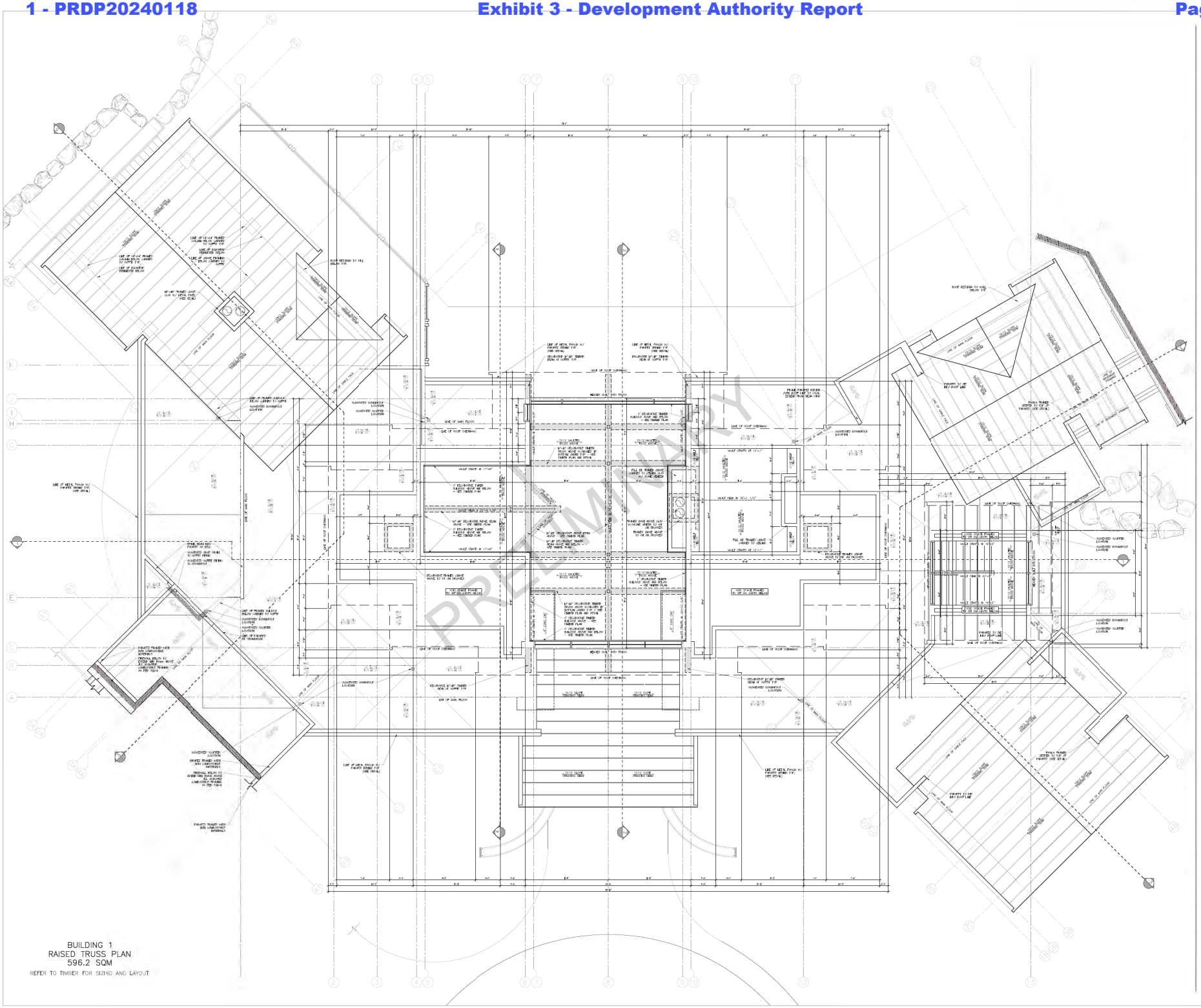
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6028 SQ.FT.
MECH STORAGE (UNDEVELOPED) AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE (UNDEVELOPED) AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 2
MAIN FLOOR PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.6



BUILDING 1
RAISED TRUSS PLAN
596.2 SQM
REFER TO TIMBER FOR SIZING AND LAYOUT

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602
544 47TH AVENUE NW
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T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

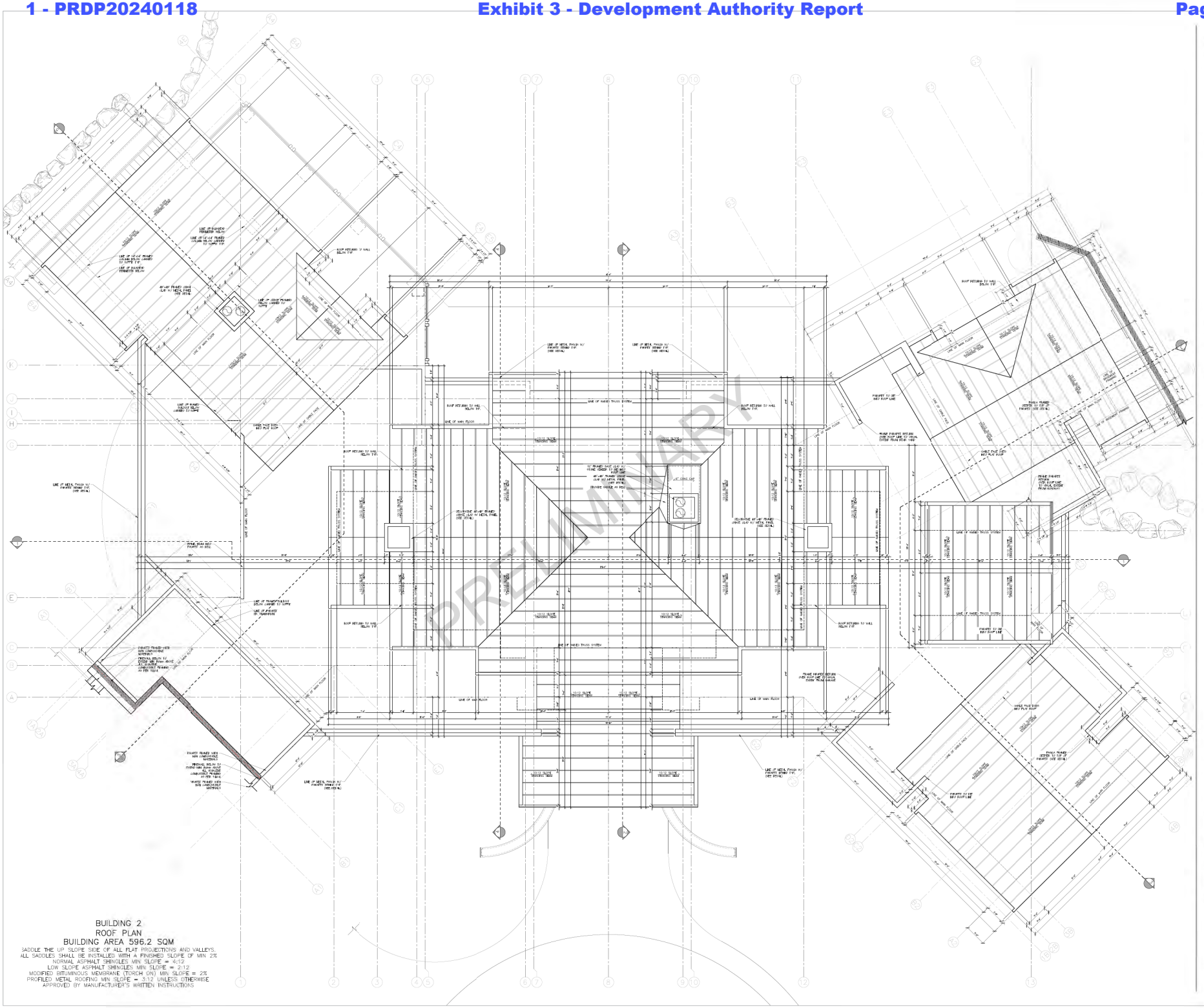
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4026 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	176 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 2
RAISED TRUSS PLAN

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A3.7



BUILDING 2
ROOF PLAN
BUILDING AREA 596.2 SQM

SADDLE THE UP SLOPE SIDE OF ALL FLAT PROJECTIONS AND VALLEYS.
ALL SADDLES SHALL BE INSTALLED WITH A FINISHED SLOPE OF MIN 2%
NORMAL ASPHALT SHINGLES MIN SLOPE = 4:12
LOW SLOPE ASPHALT SHINGLES MIN SLOPE = 2:12
MODIFIED BITUMINOUS MEMBRANE (TORCH ON) MIN SLOPE = 2%
PROFILED METAL ROOFING MIN SLOPE = 3:12 UNLESS OTHERWISE
APPROVED BY MANUFACTURER'S WRITTEN INSTRUCTIONS

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
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T2G 1B9

McKINLEY MASTERS

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DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

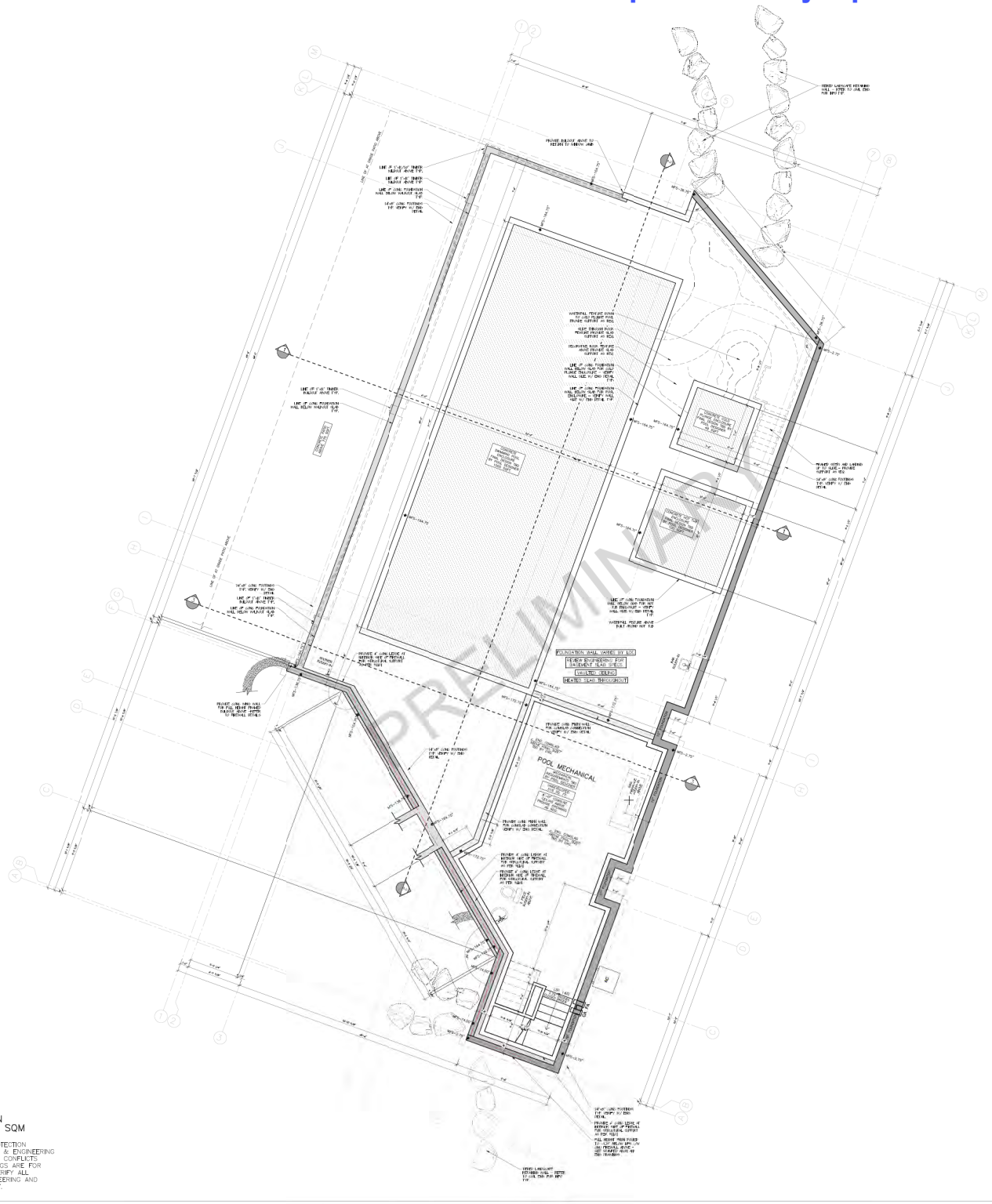
BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

BUILDING 2
ROOF PLAN

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A3.8



BUILDING 3
FOUNDATION PLAN
BUILDING AREA 325.9 SQM

MIN. 4'-0" FOOTING FROST PROTECTION
SITE COORD. FOOTINGS WITH MECHANICAL & ENGINEERING AS REQUIRED TO AVOID MECHANICAL CONFLICTS
FOOTINGS SHOWN ON DESIGN DRAWINGS ARE FOR REFERENCE ONLY. BUILDER TO VERIFY ALL FOOTING REQUIREMENTS WITH ENGINEERING AND LAYOUTS PRIOR TO CONST.

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
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T2G 1B9

403 | 239 | 0602
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LOT 4
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REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
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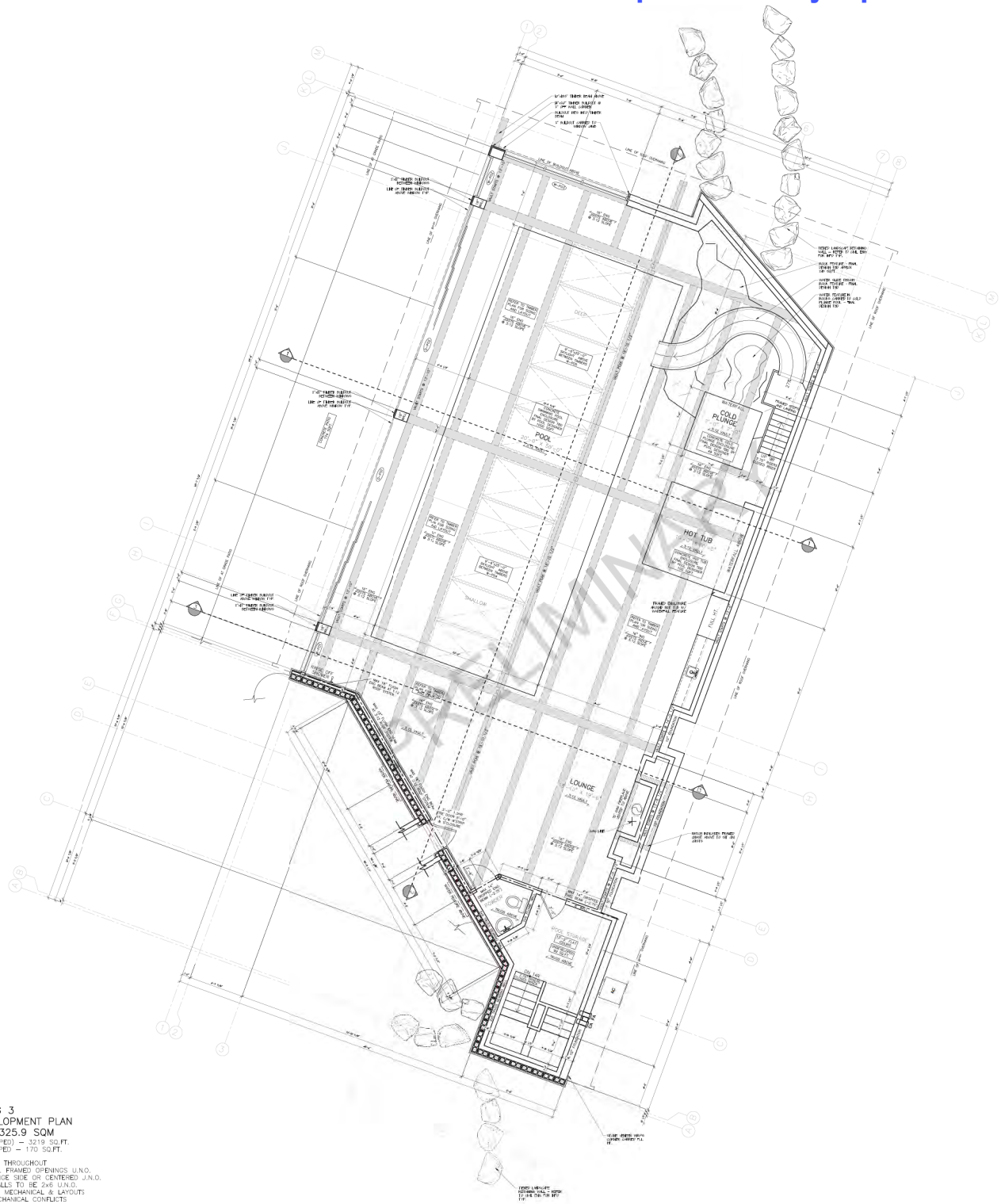
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 3
FOUNDATION PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.9



BUILDING 3
LOWER LEVEL DEVELOPMENT PLAN
BUILDING AREA 325.9 SQM
LOWER LEVEL AREA (DEVELOPED) – 3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED – 170 SQ.FT.

3:12 VAULTED CEILING THROUGHOUT
9'–0" HT. DOORS U.N.O./9'–0" HT. FRAMED OPENINGS U.N.O.
ALL DOORS TO HAVE 6" JAMB ON HINGE SIDE OR CENTERED U.N.O.
ALL LOWER LEVEL INTERIOR WALLS TO BE 2x6 U.N.O.
SITE COORD. JOIST SPACING WITH MECHANICAL & LAYOUTS
AS REQUIRED TO AVOID MECHANICAL CONFLICTS

DEANTHOMAS
DESIGN GROUP

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1109 OLYMPIC WAY SE
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T2G 1B9

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403 | 239 | 0602
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ROCKYVIEW COUNTY, AB

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REVISION SCHEDULE:

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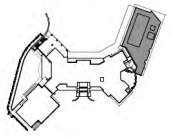


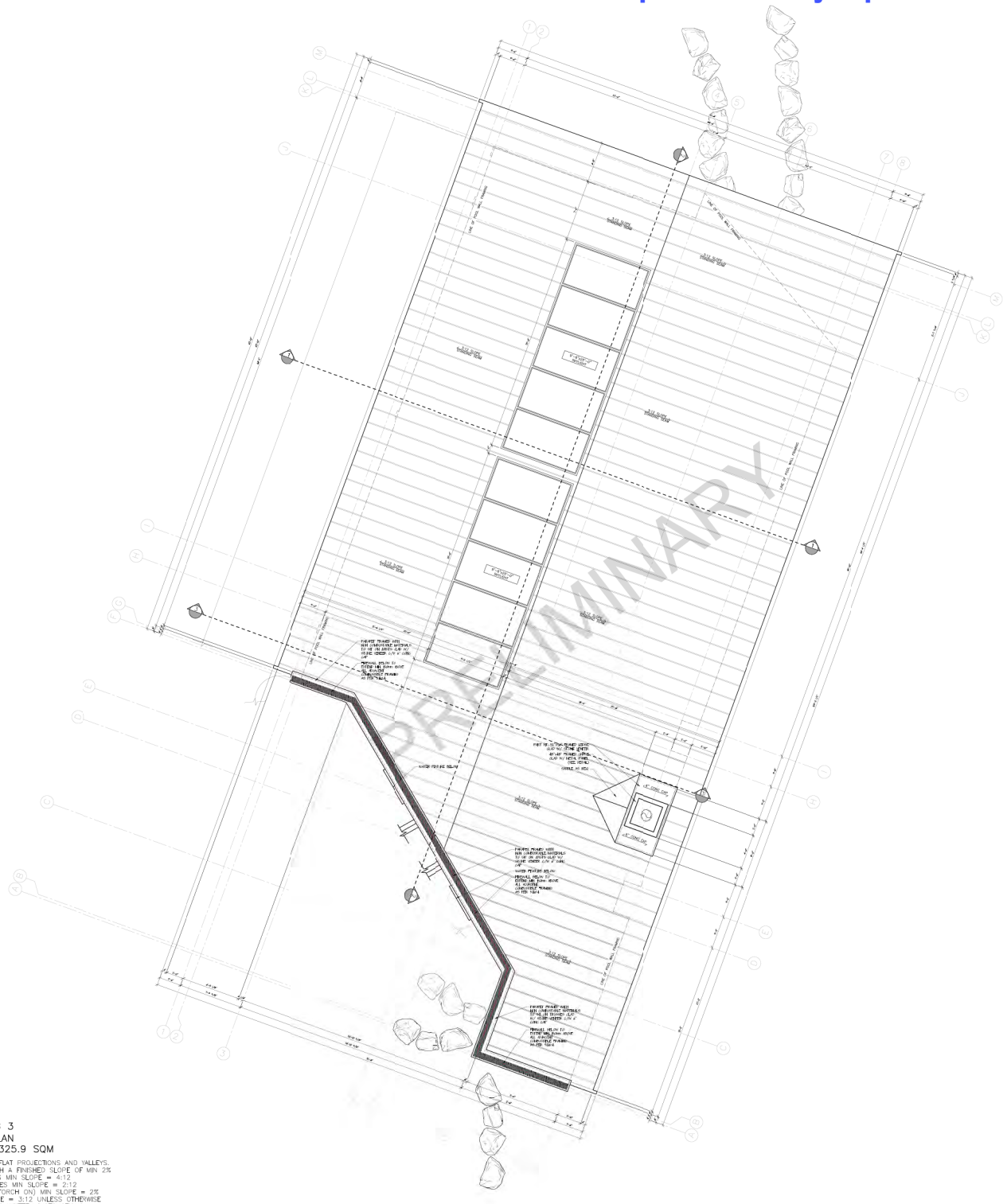
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6026 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
BUILDING 3
LOWER LEVEL DEV PLAN

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A3.10



BUILDING 3
ROOF PLAN
BUILDING AREA 325.9 SQM

SADDLE THE UP SLOPE SIDE OF ALL FLAT PROJECTIONS AND VALLEYS.
ALL SADDLES SHALL BE INSTALLED WITH A FINISHED SLOPE OF MIN 2%
NORMAL ASPHALT SHINGLES MIN SLOPE = 4:12
LOW SLOPE ASPHALT SHINGLES MIN SLOPE = 2:12
MODIFIED BITUMINOUS MEMBRANE (TORCH ON) MIN SLOPE = 2%
PROFILED METAL ROOFING MIN SLOPE = 3:12 UNLESS OTHERWISE
APPROVED BY MANUFACTURER'S WRITTEN INSTRUCTIONS

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
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McKINLEY MASTERS

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544 47TH AVENUE NW
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PROJECT:

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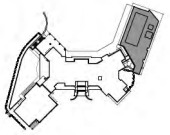
242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP



FLOOR AREAS:

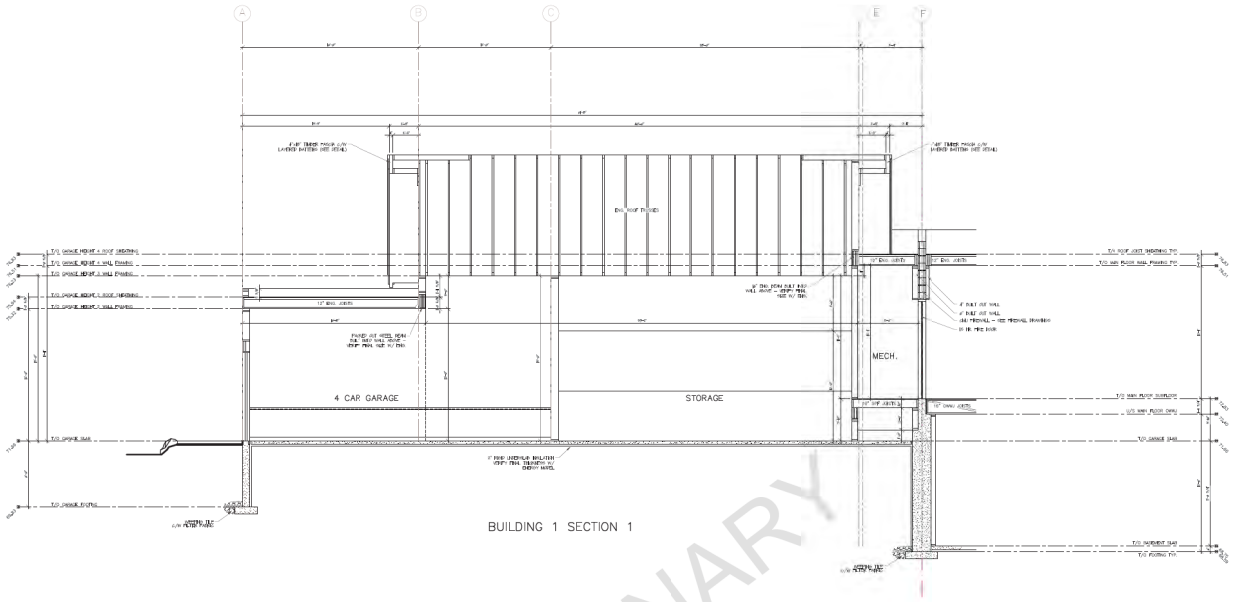
BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4326 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

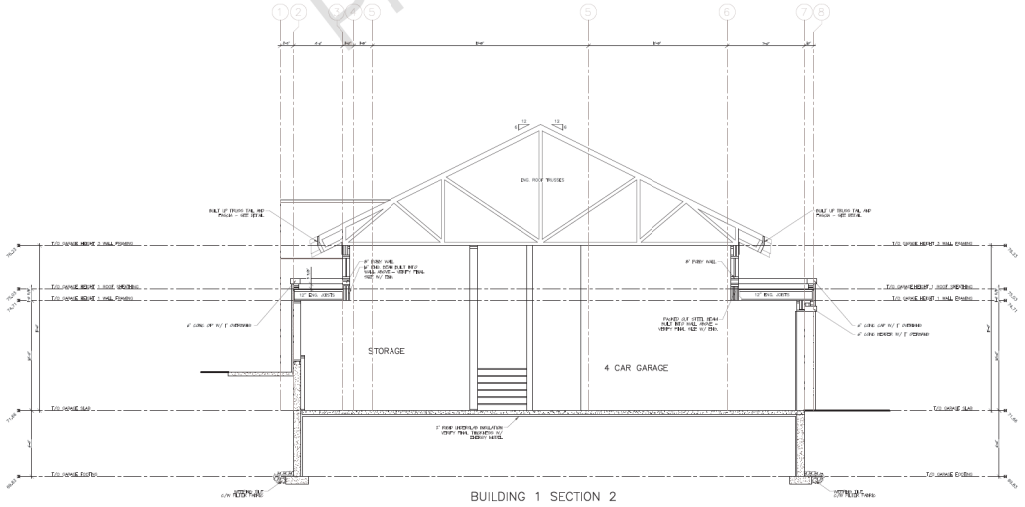
BUILDING 3
ROOF PLAN

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A3.11



BUILDING 1 SECTION 1



BUILDING 1 SECTION 2

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
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PROJECT:
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242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
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1.	ISSUED FOR PRICING	JAN 29, 2024
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DRAWN BY: RC,CW,WM,BP

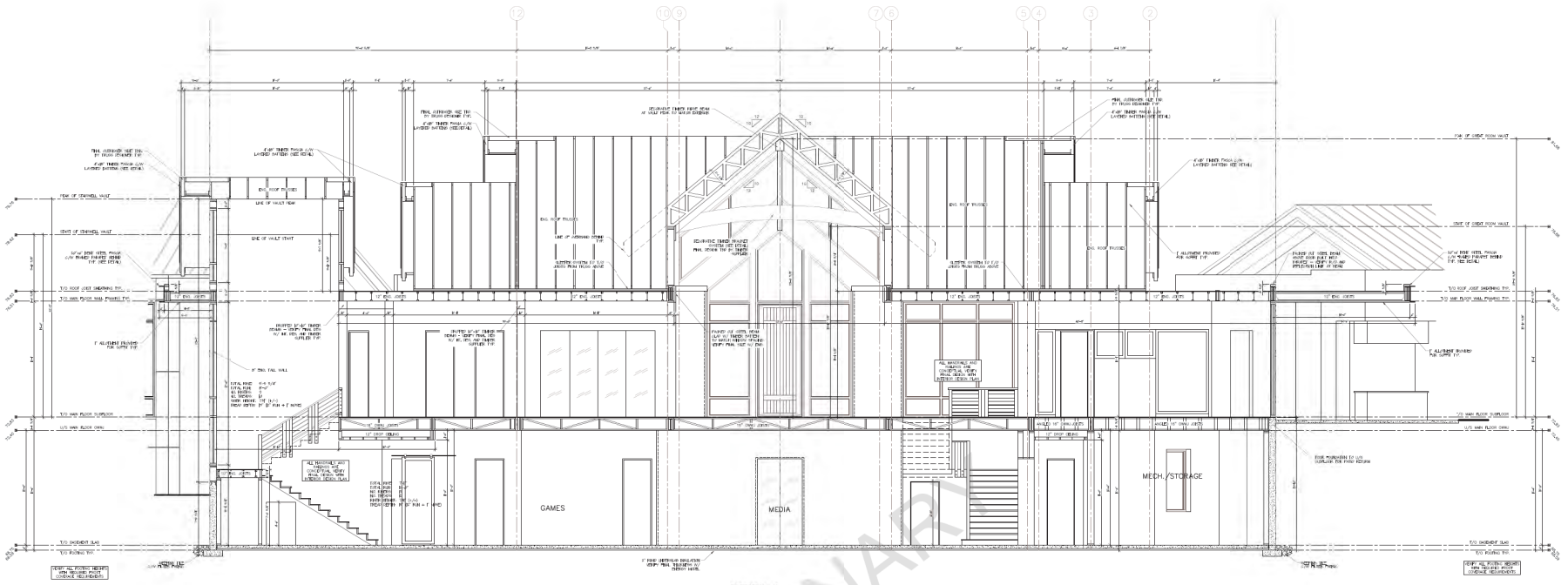
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4529 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

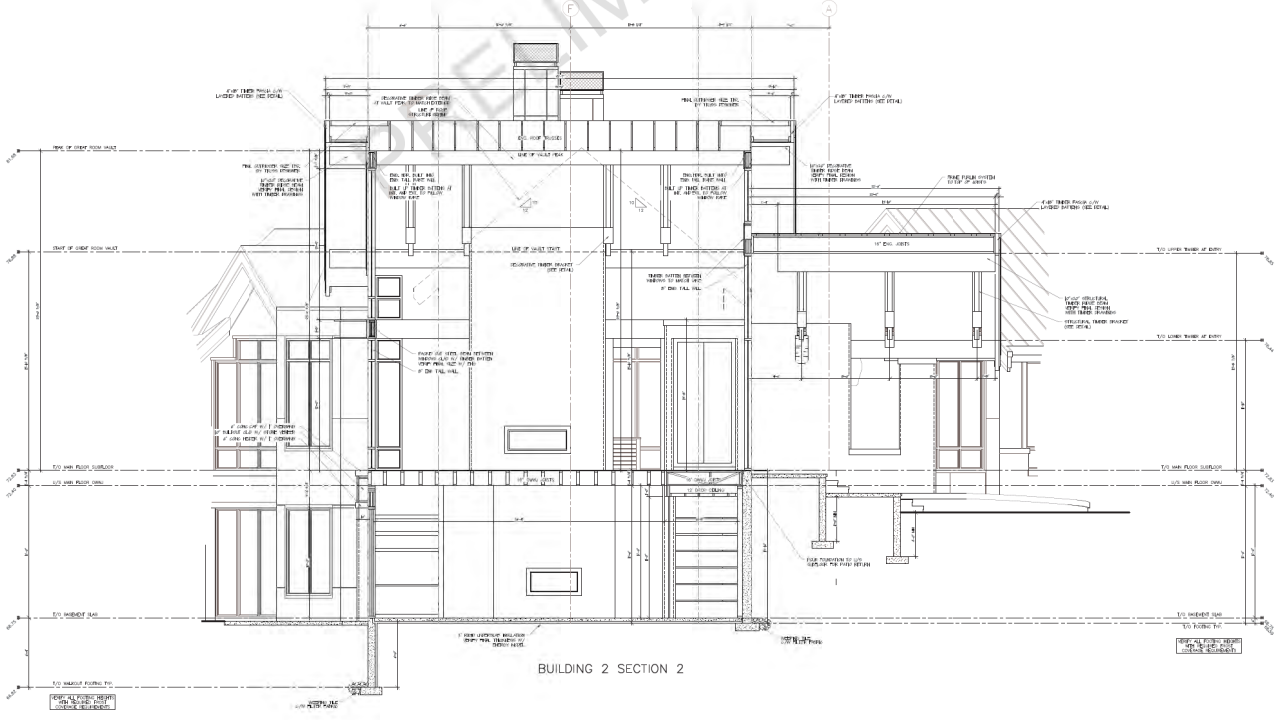
DRAWING TITLE:
BUILDING 1 SECTIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A4.1



BUILDING 2 SECTION 1



BUILDING 2 SECTION 2

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
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PROJECT:
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242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
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REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

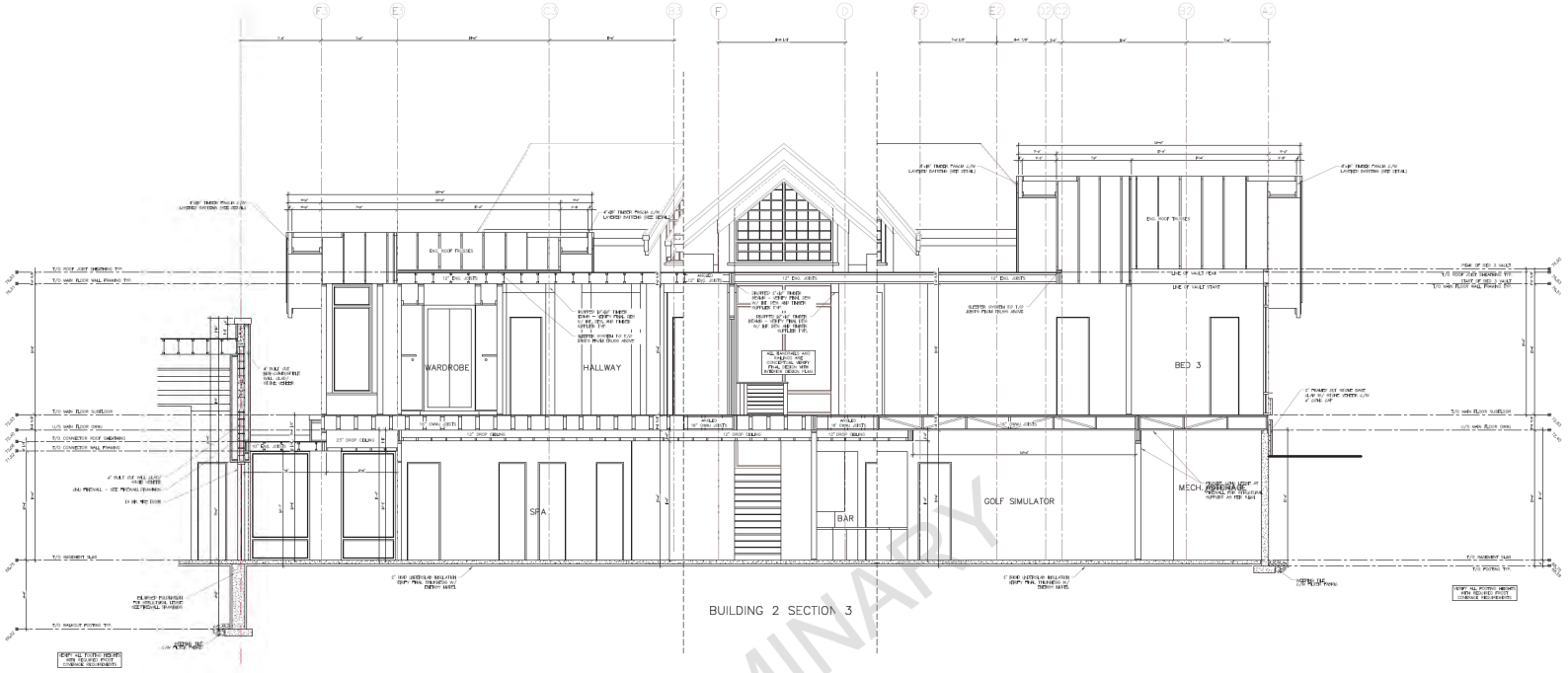
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1055 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6029 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

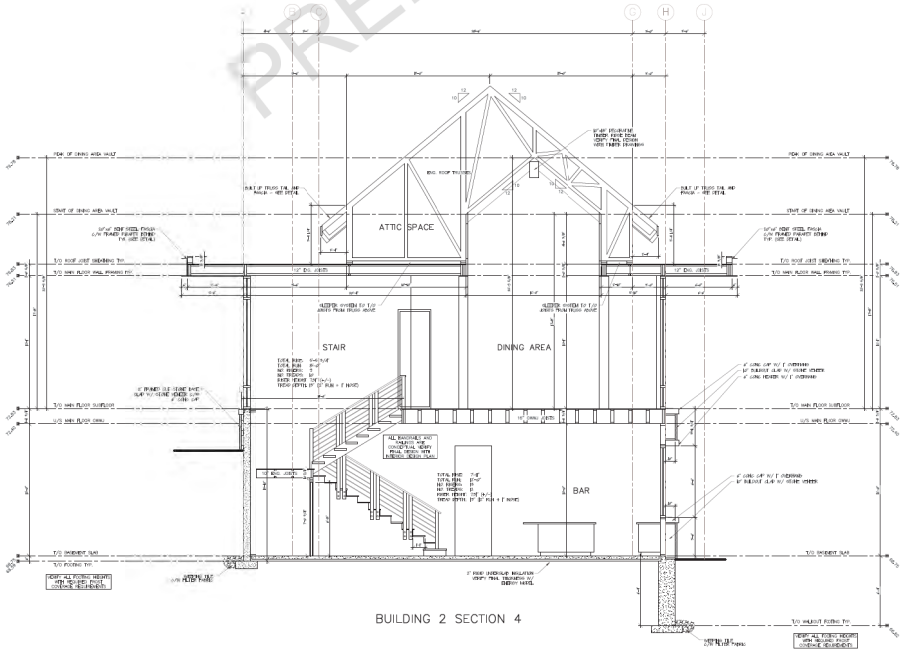
DRAWING TITLE:
BUILDING 2 SECTIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A4.2



BUILDING 2 SECTION 3



BUILDING 2 SECTION 4

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2 2024

DRAWN BY: RC,CW,WM,BP

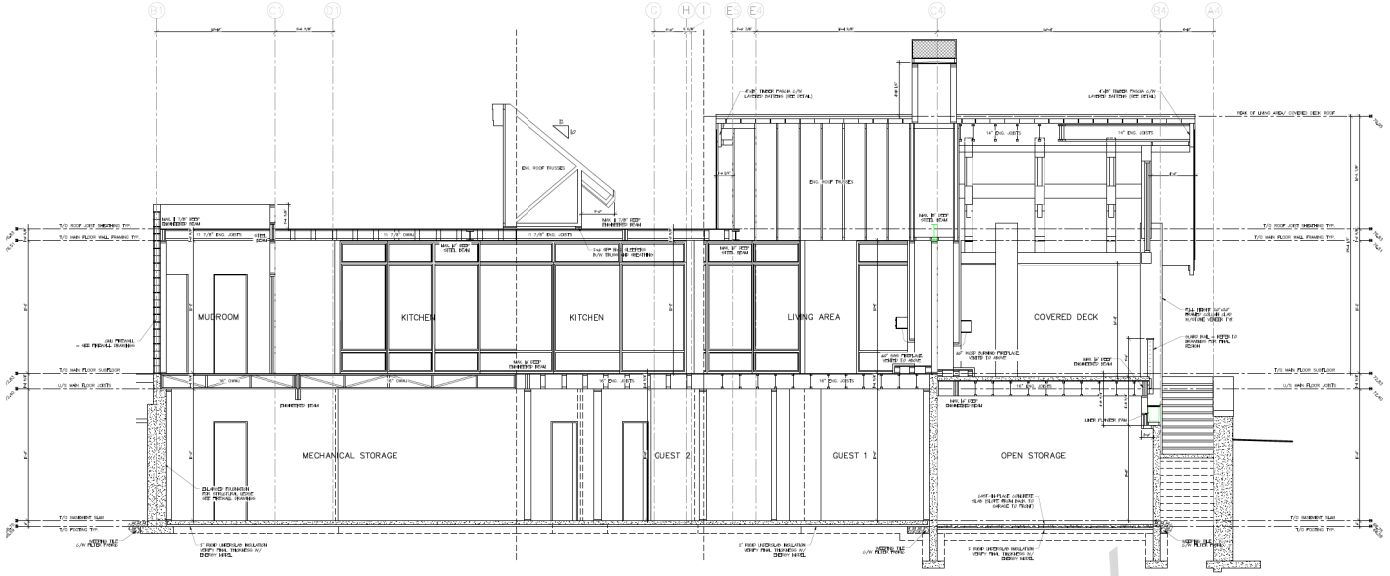
FLOOR AREAS:

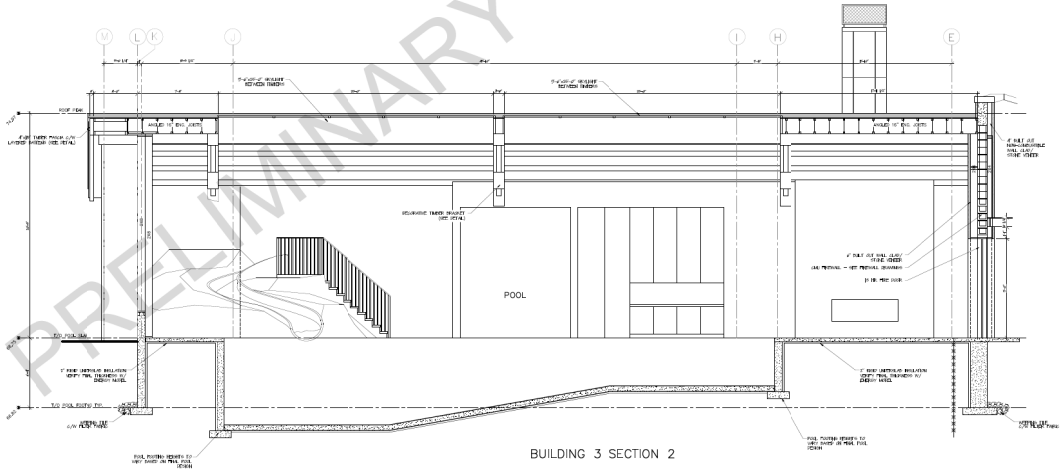
BUILDING 1	
ATTACHED GARAGE AREA	1005 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT
MAIN FLOOR DEVELOPED AREA	4629 SQ.FT
MECH STORAGE/UNDEVELOPED AREA	1436 SQ.FT
COVERED DECK	370 SQ.FT
COVERED VERANDA	207 SQ.FT
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT

DRAWING TITLE:
BUILDING 2 SECTIONS

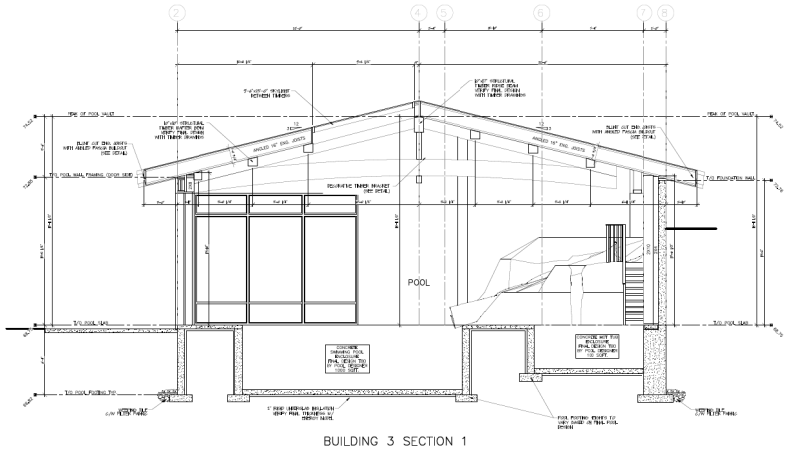
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A4.3

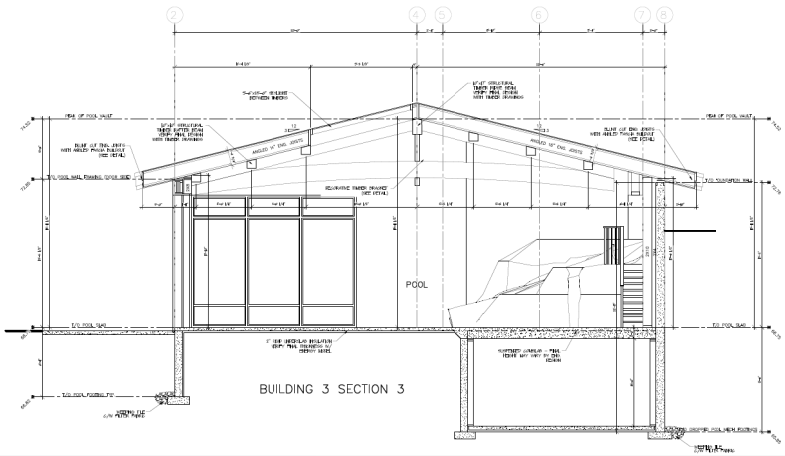




BUILDING 3 SECTION 2



BUILDING 3 SECTION 1



BUILDING 3 SECTION 3

DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4628 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

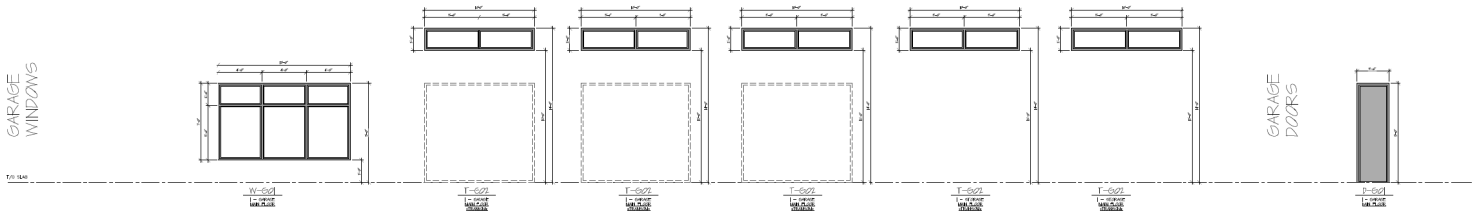
BUILDING 2 SECTIONS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

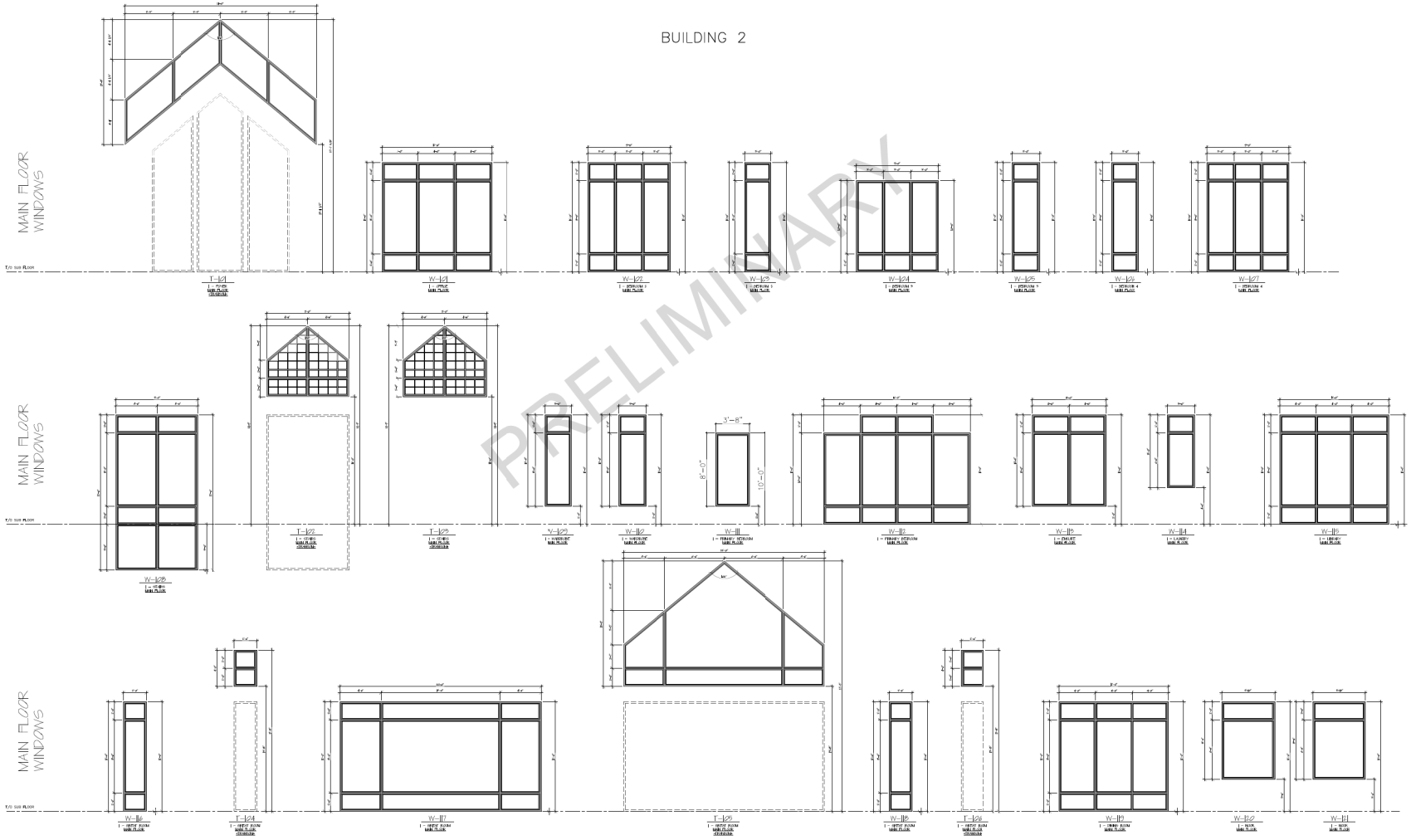
SHEET: A4.4

WINDOW AND DOOR SCHEDULE

BUILDING 1



BUILDING 2



DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4026 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
WINDOW & DOOR SCHEDULE

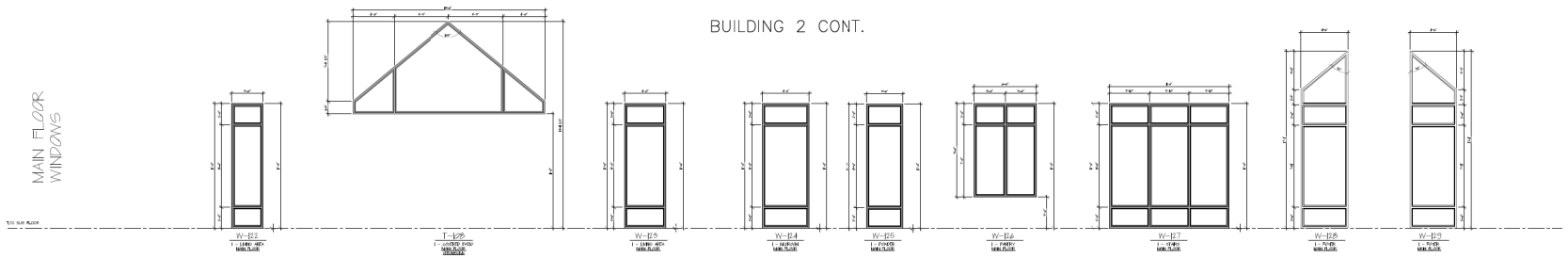
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A5.1

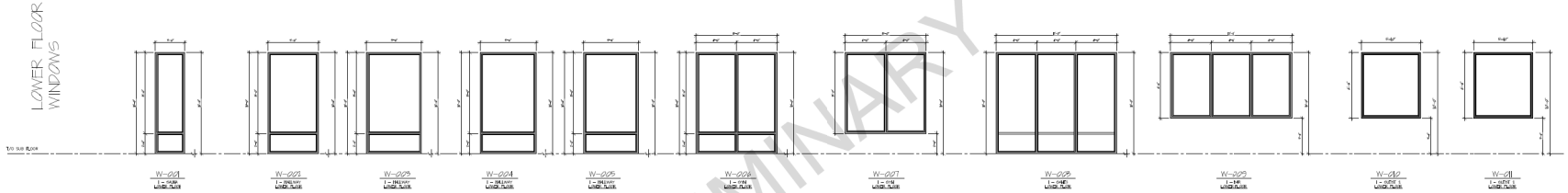
WINDOW AND DOOR SCHEDULE

BUILDING 2 CONT.

MAIN FLOOR WINDOWS



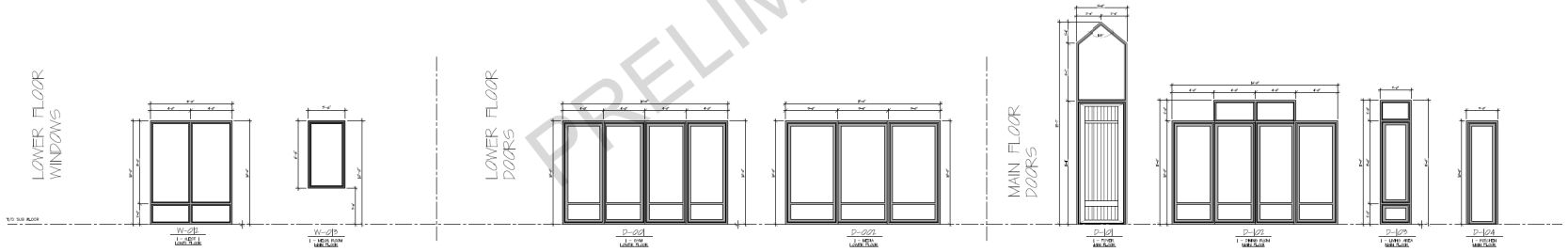
LOWER FLOOR WINDOWS



LOWER FLOOR WINDOWS

LOWER FLOOR DOORS

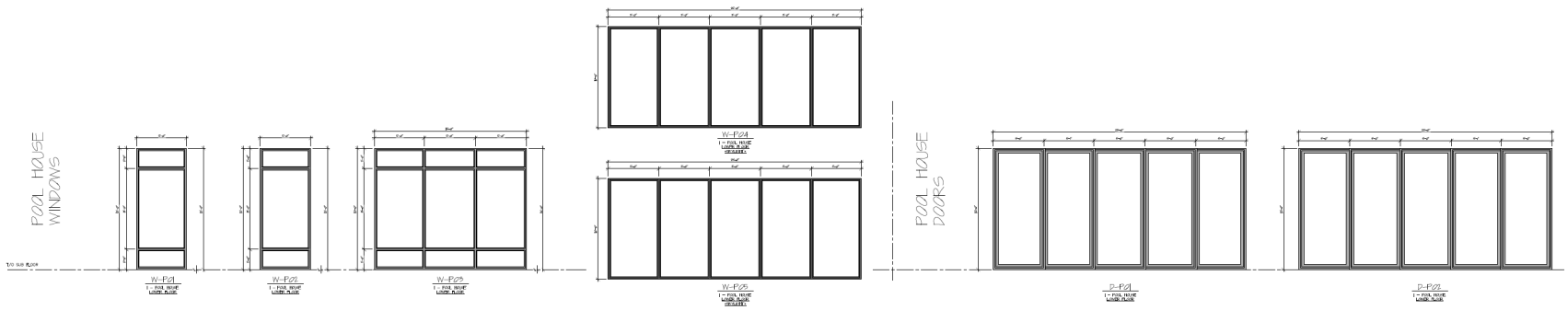
MAIN FLOOR DOORS



BUILDING 3

POOL HOUSE WINDOWS

POOL HOUSE DOORS



DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

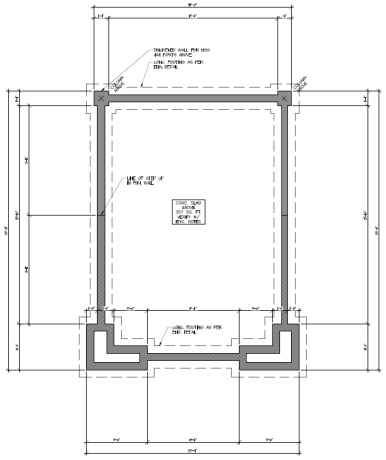
FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4026 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

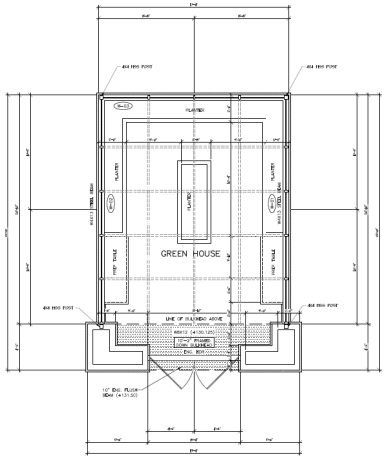
DRAWING TITLE:
WINDOW & DOOR SCHEDULE

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

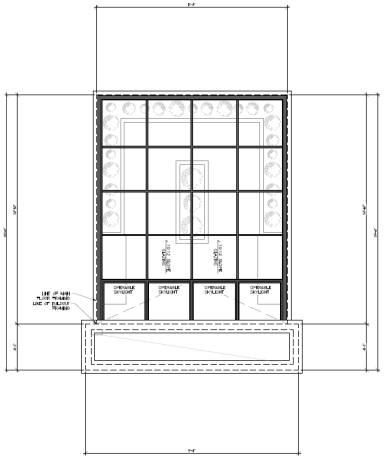
SHEET: A5.2



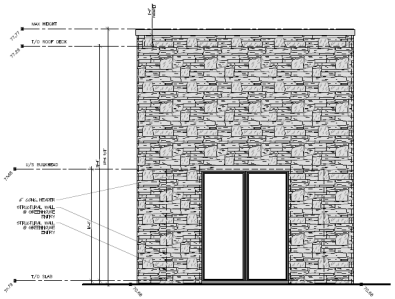
FOUNDATION PLAN



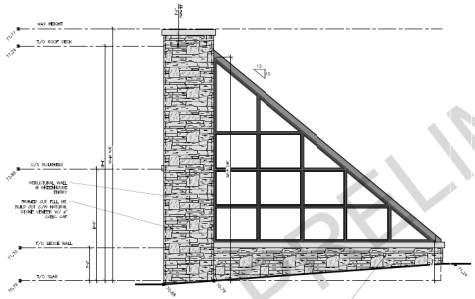
MAIN FLOOR PLAN
MAIN FLOOR AREA = 419 SQ.FT.



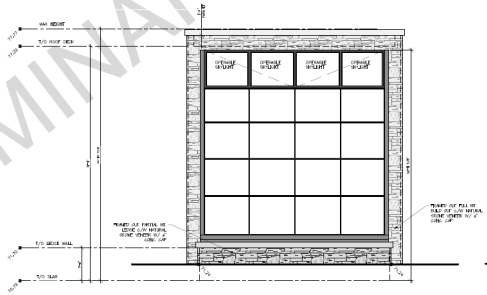
ROOF PLAN



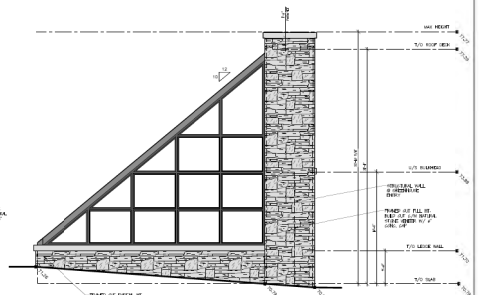
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



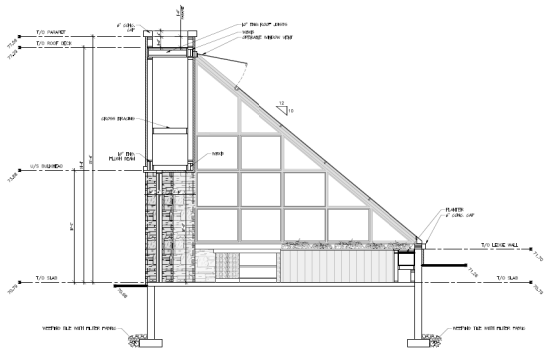
RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



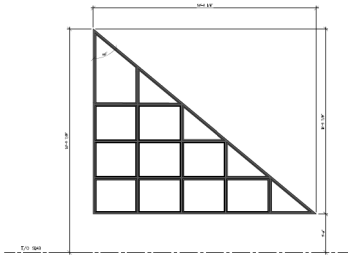
REAR ELEVATION
SCALE: 1/4" = 1'-0"

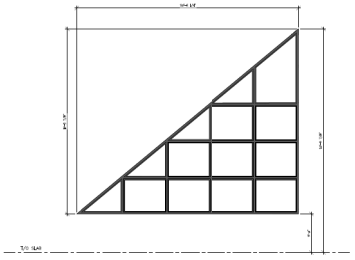


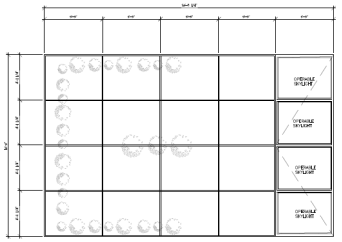
LEFT ELEVATION
SCALE: 1/4" = 1'-0"



SECTION 1
SCALE: 1/4" = 1'-0"







WINDOW SCHEDULE
SCALE: 1/4" = 1'-0"

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

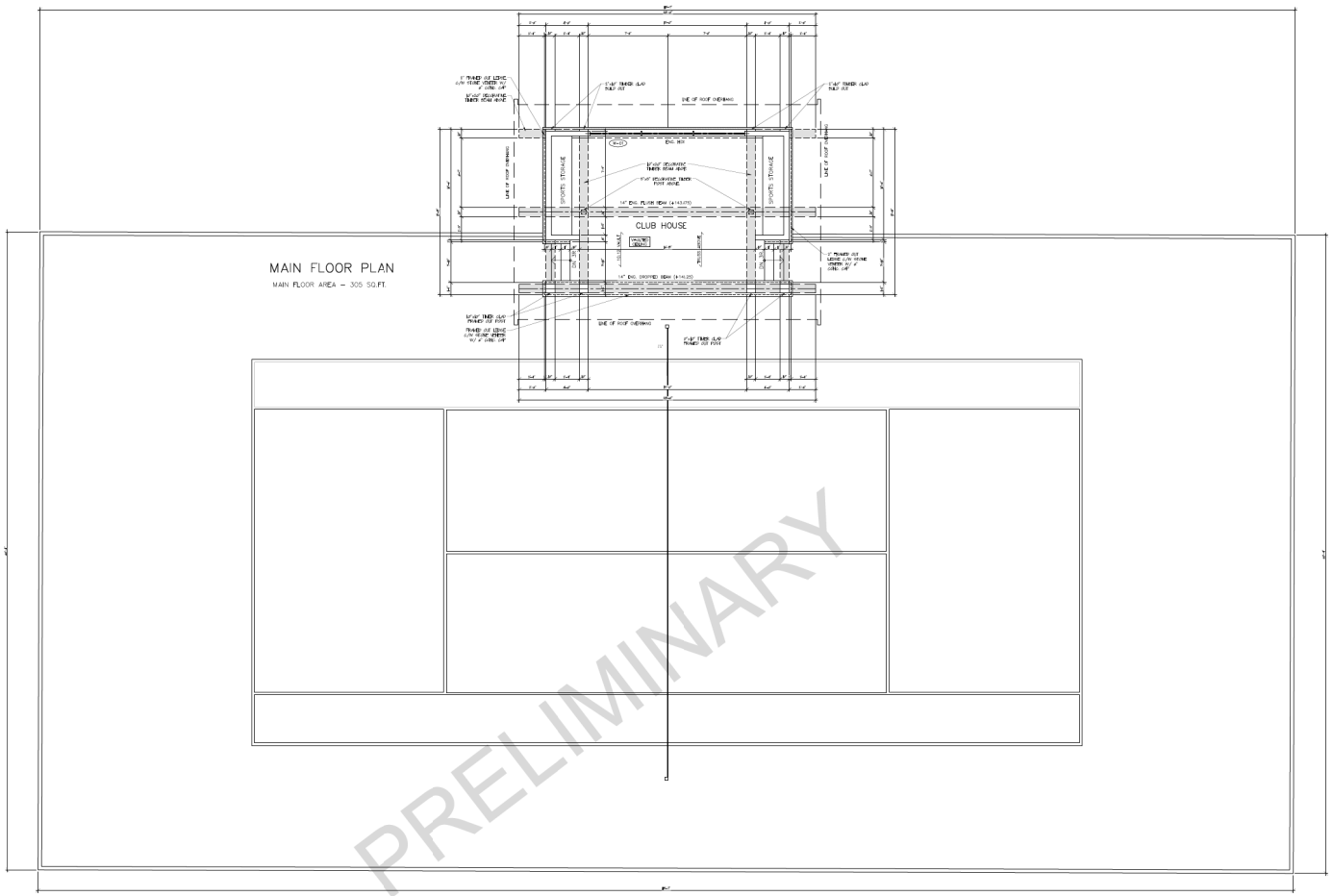
FLOOR AREAS:

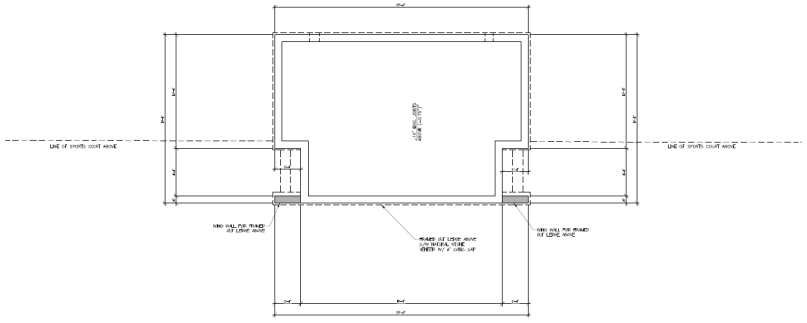
BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

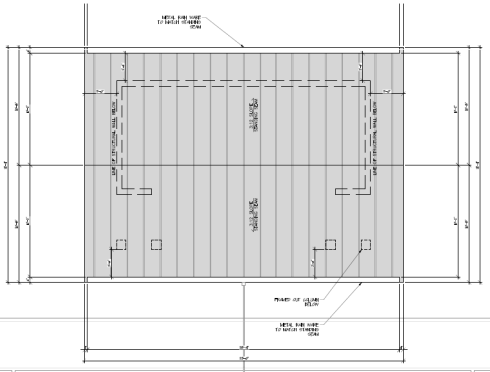
DRAWING TITLE:
GREENHOUSE

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A6.1







ROOF PLAN

FOUNDATION PLAN

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

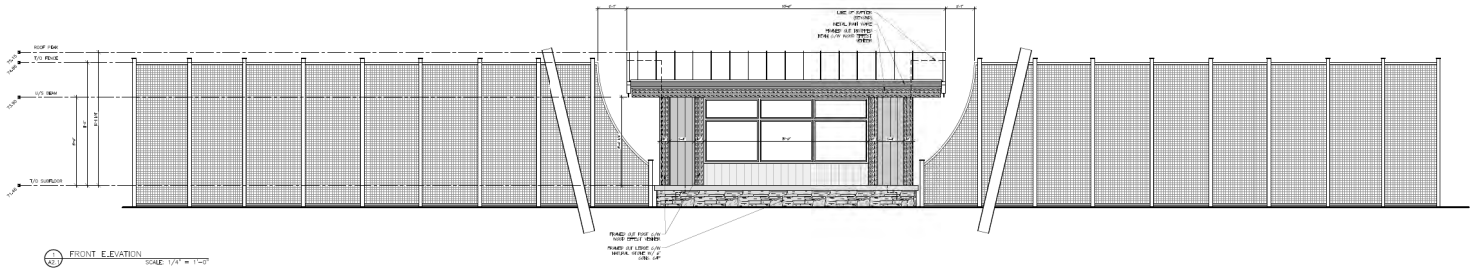
BUILDING 1	
ATTACHED GARAGE AREA	1935 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6026 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:

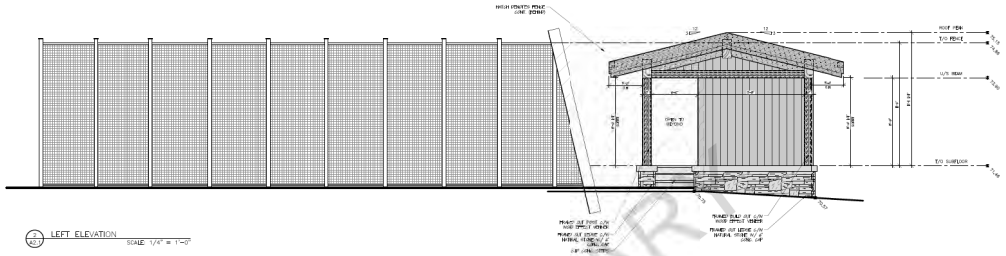
SPORTS COURT FLOOR PLANS

SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

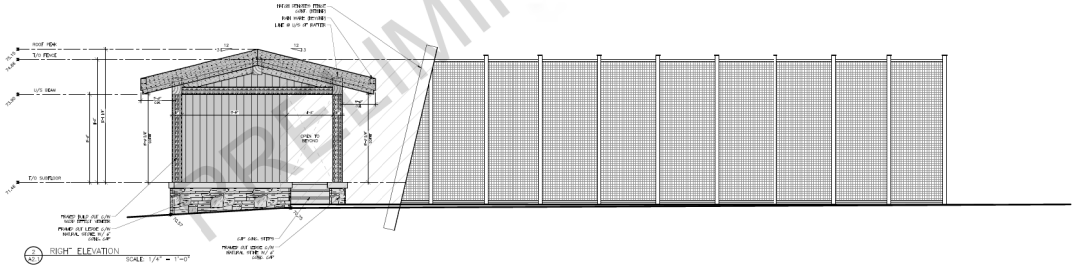
SHEET: A7.1



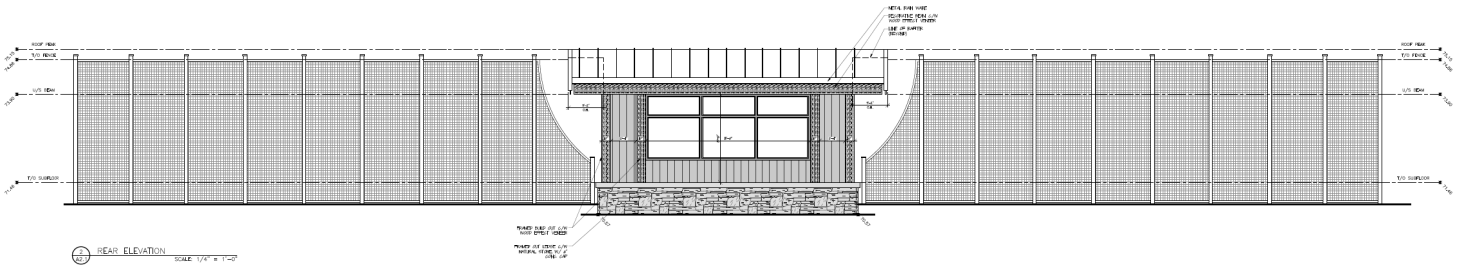
1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



2 LEFT ELEVATION
SCALE: 1/4" = 1'-0"



3 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



4 REAR ELEVATION
SCALE: 1/4" = 1'-0"

DEANTHOMAS
DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

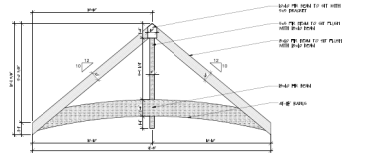
BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	4028 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	1438 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
SPORTS COURT ELEVATIONS

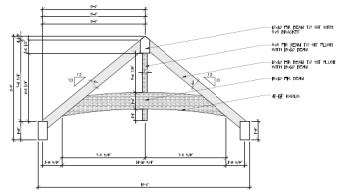
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A7.2

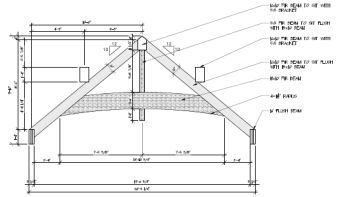
CONSTRUCTION DETAILS



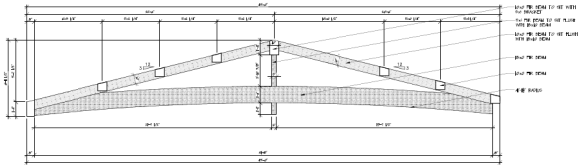
INTERIOR TIMBER – 10"
SCALE: XX" = 1'-0"



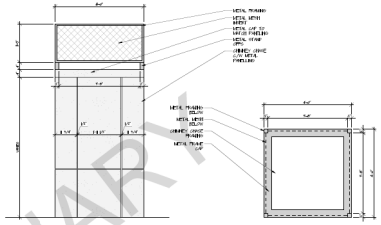
EXTERIOR VERANDA TIMBER
SCALE: XX" = 1'-0"



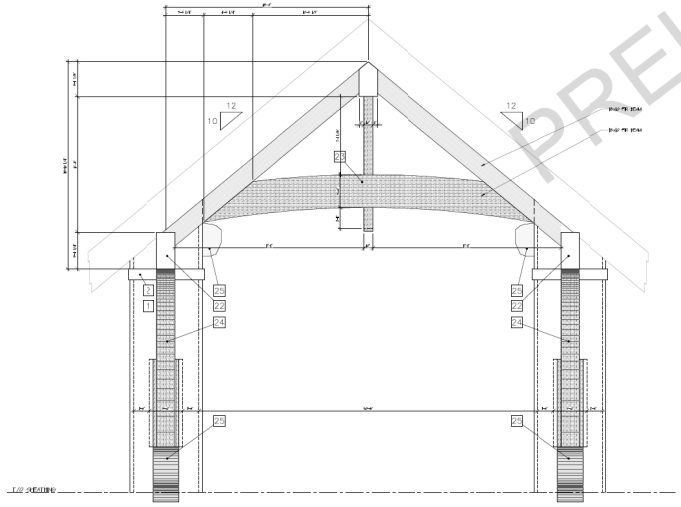
COVERED DECK TIMBER
SCALE: XX" = 1'-0"



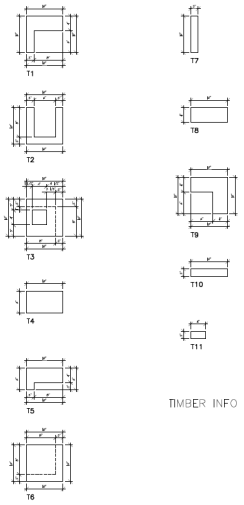
POOL HOUSE TIMBER
SCALE: XX" = 1'-0"



CHIMNEY CHASE
SCALE: XX" = 1'-0"



VERANDA TIMBER AND COLUMN DETAIL
SCALE: XX" = 1'-0"



TIMBER INFO

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

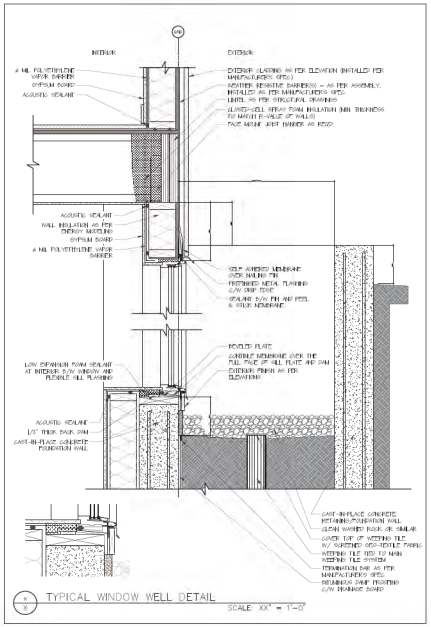
BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6026 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLDGS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
PRELIMINARY DETAILS

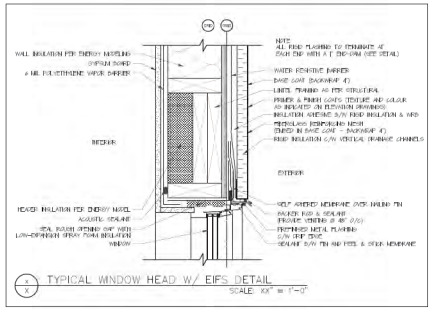
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A8.1

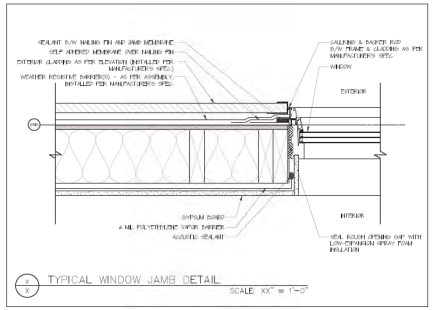
CONSTRUCTION DETAILS



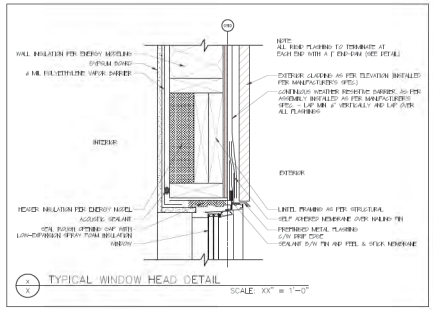
TYPICAL WINDOW WELL DETAIL SCALE: XX" = 1'-0"



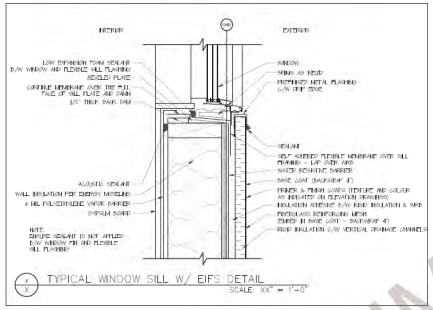
TYPICAL WINDOW HEAD W/ EIFS DETAIL SCALE: XX" = 1'-0"



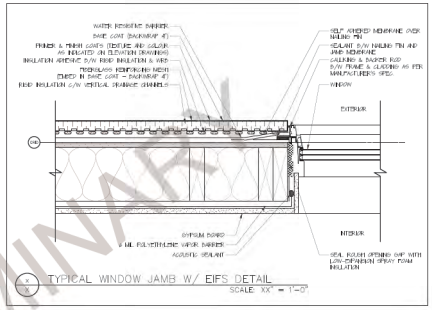
TYPICAL WINDOW JAMB DETAIL SCALE: XX" = 1'-0"



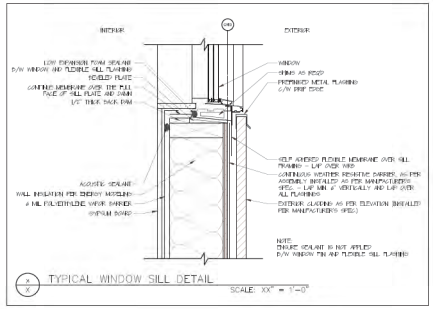
TYPICAL WINDOW HEAD DETAIL SCALE: XX" = 1'-0"



TYPICAL WINDOW SILL W/ EIFS DETAIL SCALE: XX" = 1'-0"



TYPICAL WINDOW JAMB W/ EIFS DETAIL SCALE: XX" = 1'-0"



TYPICAL WINDOW SILL DETAIL SCALE: XX" = 1'-0"

TYPICAL WINDOW INSTALLATION SCALE: XX" = 1'-0"

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0802
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB.

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	462 SQ.FT.
MECHANICAL AREA	45 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4461 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6028 SQ.FT.
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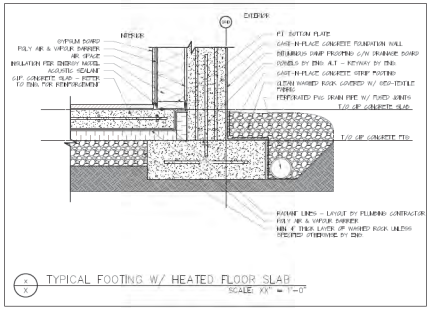
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLOCKS)	9281 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT.
MECH/STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
CONSTRUCTION DETAILS

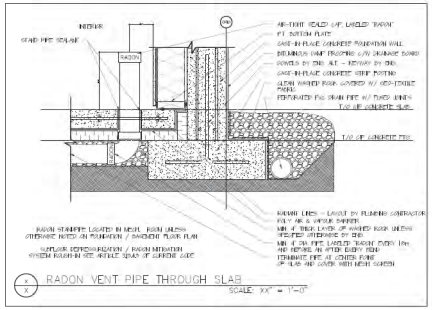
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A8.2

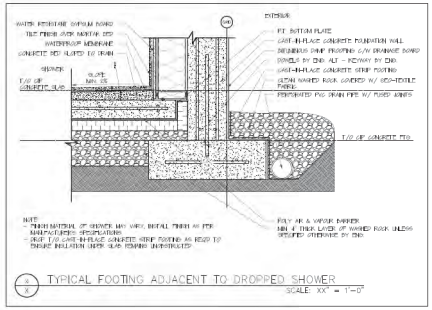
CONSTRUCTION DETAILS



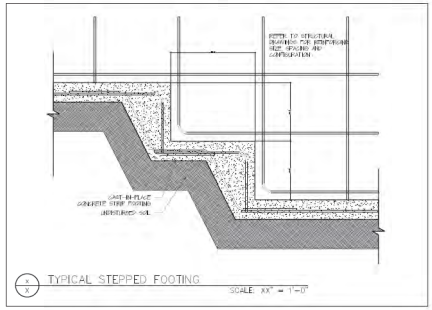
TYPICAL FOOTING W/ HEATED FLOOR SLAB
SCALE: XX" = 1'-0"



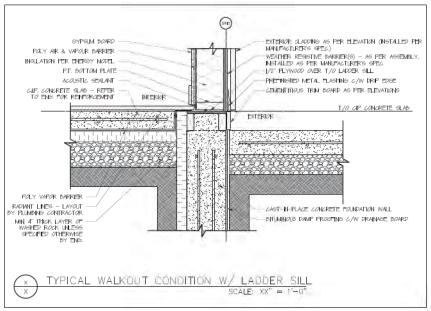
RADON VENT PIPE THROUGH SLAB
SCALE: XX" = 1'-0"



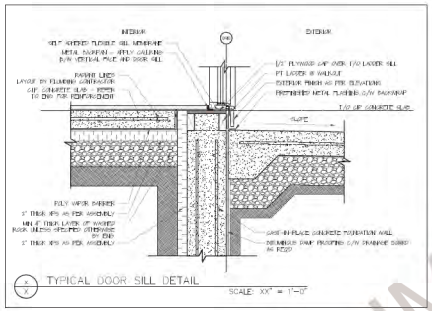
TYPICAL FOOTING ADJACENT TO DROPPED SHOWER
SCALE: XX" = 1'-0"



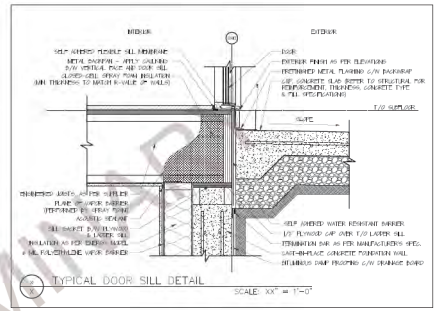
TYPICAL STEPPED FOOTING
SCALE: XX" = 1'-0"



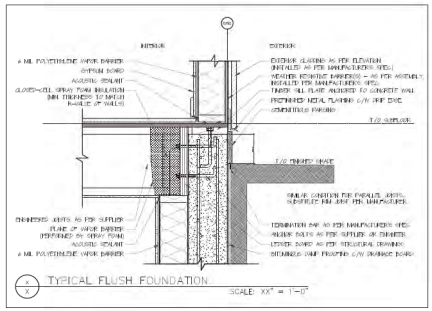
TYPICAL WALKOUT CONDITION W/ LADDER SILL
SCALE: XX" = 1'-0"



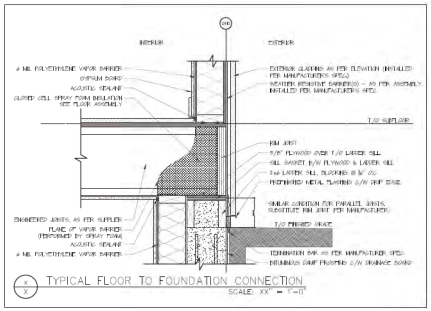
TYPICAL DOOR SILL DETAIL
SCALE: XX" = 1'-0"



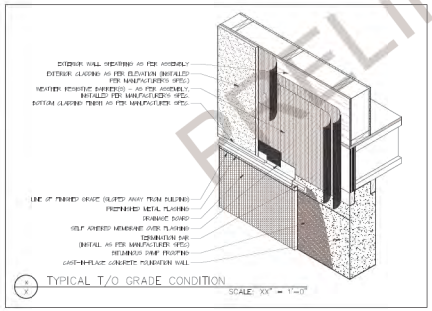
TYPICAL DOOR SILL DETAIL
SCALE: XX" = 1'-0"



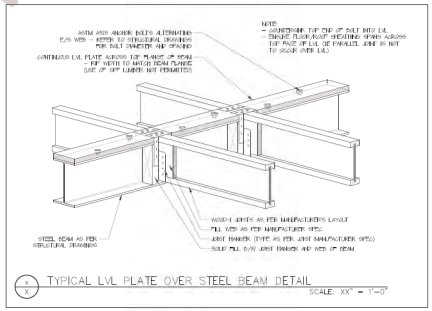
TYPICAL FLUSH FOUNDATION
SCALE: XX" = 1'-0"



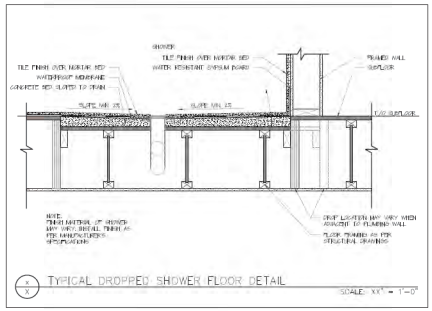
TYPICAL FLOOR TO FOUNDATION CONNECTION
SCALE: XX" = 1'-0"



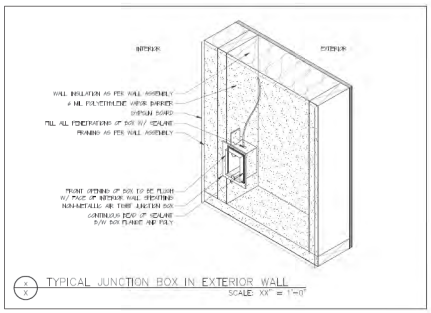
TYPICAL T/O GRADE CONDITION
SCALE: XX" = 1'-0"



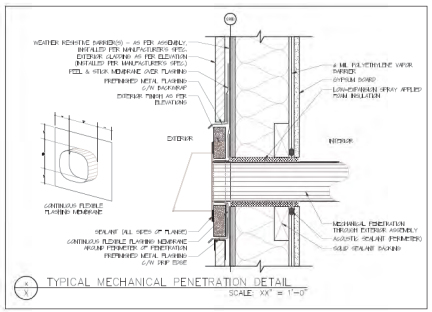
TYPICAL LVL PLATE OVER STEEL BEAM DETAIL
SCALE: XX" = 1'-0"



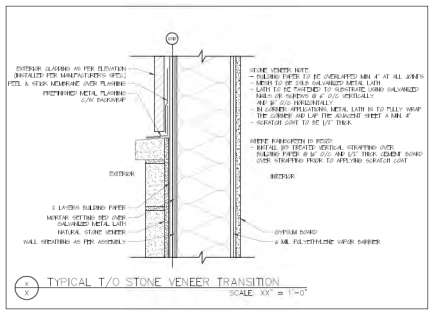
TYPICAL DROPPED SHOWER FLOOR DETAIL
SCALE: XX" = 1'-0"



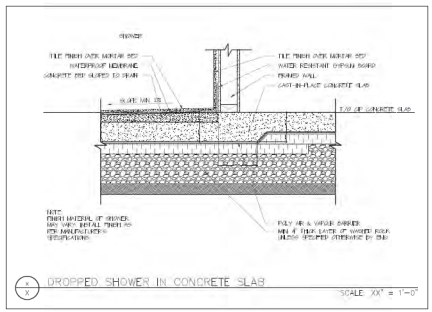
TYPICAL JUNCTION BOX IN EXTERIOR WALL
SCALE: XX" = 1'-0"



TYPICAL MECHANICAL PENETRATION DETAIL
SCALE: XX" = 1'-0"



TYPICAL T/O STONE VENEER TRANSITION
SCALE: XX" = 1'-0"



DROPPED SHOWER IN CONCRETE SLAB
SCALE: XX" = 1'-0"

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
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T3E 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB.

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1995 SQ.FT.
STORAGE AREA	482 SQ.FT.
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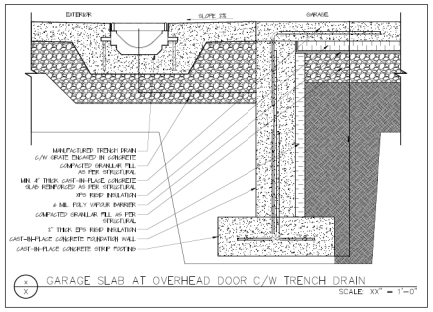
BUILDING 3	
DEVELOPED POOL AREA	5219 SQ.FT.
MECH STORAGE/UNDEVELOPED AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
CONSTRUCTION DETAILS

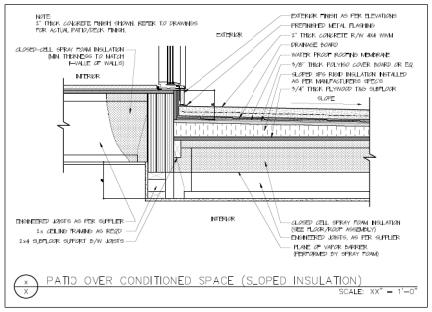
SCALE: 1/4"= 1'-0"
DATE: FEB 2, 2024

SHEET: A8.3

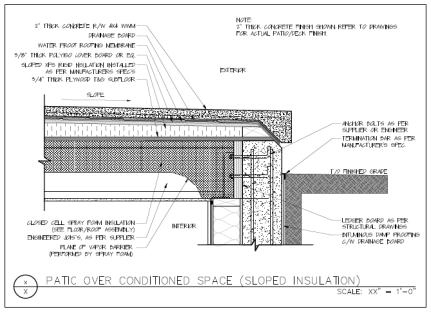
CONSTRUCTION DETAILS



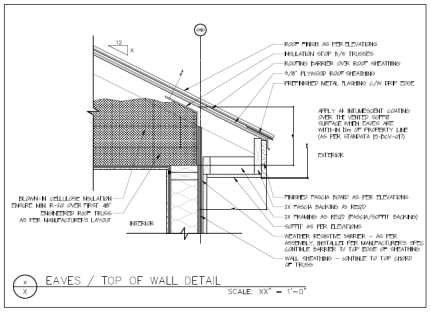
GARAGE SLAB AT OVERHEAD DOOR C/W TRENCH DRAIN
SCALE: XX" = 1'-0"



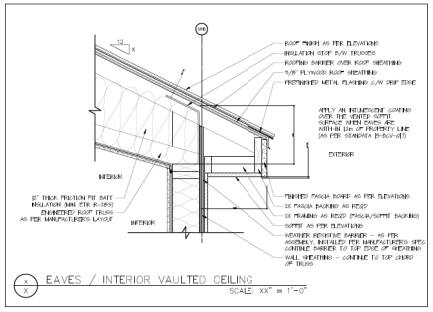
PATIO OVER CONDITIONED SPACE (SLOPED INSULATION)
SCALE: XX" = 1'-0"



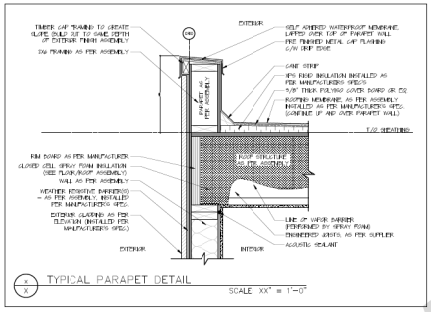
PATIO OVER CONDITIONED SPACE (SLOPED INSULATION)
SCALE: XX" = 1'-0"



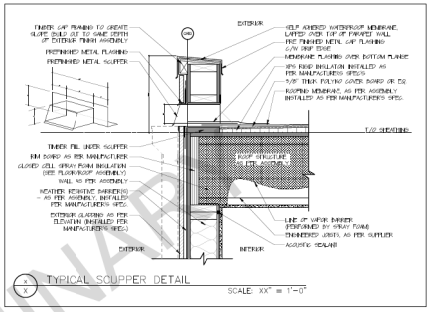
EAVES / TOP OF WALL DETAIL
SCALE: XX" = 1'-0"



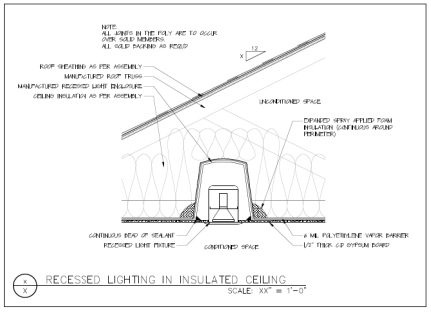
EAVES / INTERIOR VAULTED CEILING
SCALE: XX" = 1'-0"



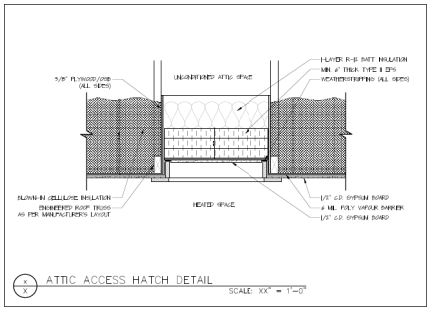
TYPICAL PARAPET DETAIL
SCALE: XX" = 1'-0"



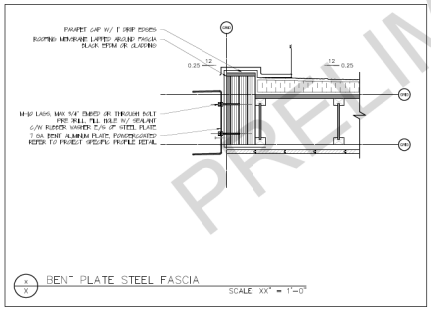
TYPICAL SCUPPER DETAIL
SCALE: XX" = 1'-0"



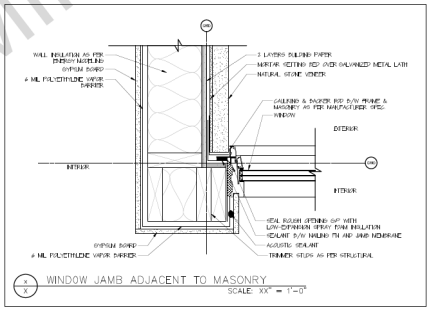
RECESSED LIGHTING IN INSULATED CEILING
SCALE: XX" = 1'-0"



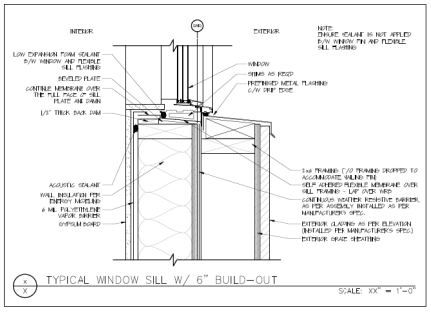
ATTIC ACCESS HATCH DETAIL
SCALE: XX" = 1'-0"



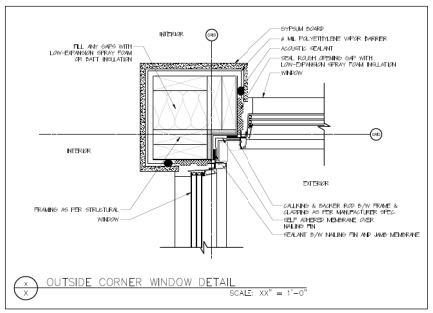
BEN" PLATE STEEL FASCIA
SCALE: XX" = 1'-0"



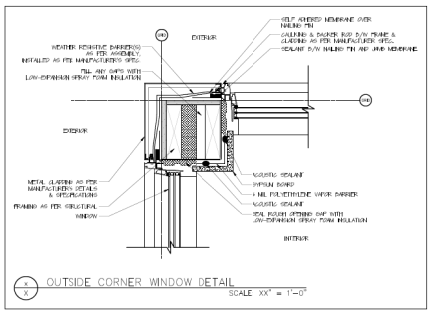
WINDOW JAMB ADJACENT TO MASONRY
SCALE: XX" = 1'-0"



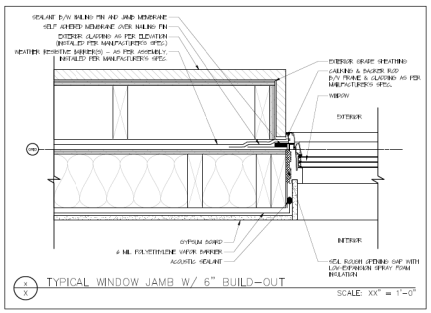
TYPICAL WINDOW SILL W/ 6" BUILD-OUT
SCALE: XX" = 1'-0"



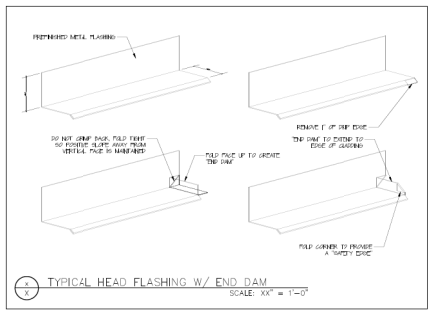
OUTSIDE CORNER WINDOW DETAIL
SCALE: XX" = 1'-0"



OUTSIDE CORNER WINDOW DETAIL
SCALE: XX" = 1'-0"



TYPICAL WINDOW JAMB W/ 6" BUILD-OUT
SCALE: XX" = 1'-0"



TYPICAL HEAD FLASHING W/ END DAM
SCALE: XX" = 1'-0"

DEANTHOMAS DESIGN GROUP
403 | 719 | 6641
1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS
403 | 239 | 0602
544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:
ISSUED FOR PRICING REVISIONS

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR PRICING	JAN 29, 2024
2.	ISSUED FOR PRICING REVISIONS	FEB 2, 2024

DRAWN BY: RC,CW,WM,BP

FLOOR AREAS:

BUILDING 1	
ATTACHED GARAGE AREA	1095 SQ.FT.
STORAGE AREA	482 SQ.FT.
MECHANICAL AREA	46 SQ.FT.
BUILDING 2	
LOWER LEVEL DEVELOPED AREA	4441 SQ.FT.
MAIN FLOOR DEVELOPED AREA	6026 SQ.FT.
MEDIVISTOR AGE (UNDEVELOPED) AREA	1436 SQ.FT.
COVERED DECK	370 SQ.FT.
COVERED VERANDA	207 SQ.FT.
WALKOUT PATIO (ALL BLOCKS)	9021 SQ.FT.
BUILDING 3	
DEVELOPED POOL AREA	3219 SQ.FT.
MEDIVISTOR AGE (UNDEVELOPED) AREA	170 SQ.FT.
TOTAL DEVELOPED FLOOR AREA ABOVE GRADE	9247 SQ.FT.

DRAWING TITLE:
CONSTRUCTION DETAILS

SCALE: 1/4"=1'-0"
DATE: FEB 2, 2024

SHEET: A8.4

Rocky View County
262075 Rocky View Point
Rocky View County, AB T4A 0X2

Attn: Planning Department / Development Authority

Reference: Development Permit #PRDP20240118
Lot 4, Block 2, Plan 1512150, NE-18-24-02-05 (242253 Westbluff Road)

To whom it may concern:

Please be advised we are in receipt of your letter dated March 5, 2024 (Roll: 04618044), and would like to point out something that we trust will be considered in the evaluation of this Development Permit.

Several paragraphs in you letter reference stormwater issues (Paragraphs 2.i.; 4., 4.i, 4.ii, 18., 18.1). We would like to request that in its assessment, the County fully consider the implications of the proposed development vis-à-vis stormwater matters affecting surrounding properties.

There is a stormwater culvert in existence that runs beneath the driveway at 242259 Westbluff Road, perpendicular to the property line demarking the 242259 Westbluff Road and 242253 Westbluff Road properties. This culvert allows stormwater runoff from homes on Westbluff Ridge to flow onto the 242253 Westbluff Road property. It is located between the property lines of 15 Westbluff Ridge and 19 Westbluff Ridge. We also believe there was a berm constructed along the 242253 Westbluff Road's North property line East of the culvert, the purpose of which was to divert stormwater onto the subject property for proper drainage.

Thank you for your attention to this matter. If you could please confirm receipt of this letter and send it to Chris Lange at [redacted] and Wendy Partridge at [redacted] we would appreciate it.

Sincerely,
Chris Lange [redacted]
Wendy Partridge [redacted]

Parkland Geotechnical Consulting Ltd.
A-14, 6120 - 2nd Street S.E.
Calgary, AB, T2H 2L8
www.parklandgeo.com
T: 403 252 5036
F: 403 343 7966

August 10, 2016
Project No. CA0241-01

amartens@mcdowelldesign.com
Original will remain on file

McDowell & Associates Inc.
Suite 501, 933 - 17 Avenue SW
Calgary, Alberta
T2T 5R6

ATTN: Mr. Abe Martens

RE: Geotechnical Slope Assessment
242253 Westbluff Road
Rocky View County, Alberta

Dear Mr. Martens,

Parkland Geotechnical Consulting Ltd. (ParklandGEO) has been commissioned to undertake a slope assessment for the proposed residence at 242253 Westbluff Road, in Rocky View County, Alberta. The residence has been proposed at the crest of a southwest-facing slope. Rocky View County development guidelines allow unrestricted development on sites where slopes are no steeper than about 6.5H:1V (15 percent). This limit is set as a flag to trigger site specific slope stability assessments for proposed developments. The slope below the proposed residence is about 50 to 70 m high and up to about 3.0H:1V (33 percent) steep.

The slope assessment in this report is intended to provide a reasonable expectation with respect to slope stability and the potential for slope movement, and to communicate the technical risks so that informed development decisions can be made relating to the slope. This report is based on the results of drilling and test pitting undertaken at the site on June 22 and July 7, 2016, soil testing, site reconnaissance, and a review of available information. Available information for this assessment included: a topographic plan of the site, geological data, aerial photographs, and plan drawings for the proposed residence. In addition, three borehole logs from a previous investigation undertaken by ParklandGEO at the site in 2013 were referenced in the assessment.

1.0 SITE AND PROJECT DESCRIPTION

The proposed residence is located at 242253 Westbluff Road, in Rocky View County, Alberta. The location of the site is shown on the Key Plan, Figure 1. The residence has been proposed at the crest of a southwest-facing slope. The slope face on the property was stripped of topsoil at the time of the investigation. The natural slope to the west of the property was vegetated with native grasses and brush, and partially treed. As shown on the 2016 Aerial Photograph, Figure 8, the property is accessed from Westbluff Road and surrounded by similar residential lots in the community of Springbank.

A topographic plan of the site was provided by McDowell & Associates Inc. and four cross sectional profiles were surveyed by ParklandGEO. From the topographic plan and the survey, the slope below the proposed residence is about 50 to 70 m high and up to about 3.0H:1V (33 percent) steep.

The local geology in the area consists of a thin layer of glacial till of the Spy Hill formation, draped over tertiary gravel and bedrock of the Porcupine Hills formation of the Paleogene period. Bedrock of the Porcupine Hills formation generally consists of sandstone and siltstone. This sedimentary bedrock was formed through the cementation of ancient sand, silt, and clay particles deposited millions of years ago. Geologically, the current day slope is considered to have been formed by ancient cementation and erosion, followed by glacial action, followed by more recent water and wind erosion.

A 732 m^2 (approx.) bungalow style residence with a walkout basement has been proposed. The residence will include four bedrooms, four bathrooms, two four-car garages, and a west facing deck overlooking the walkout area. The basement has been proposed to a depth of up to about 3.5 m below exterior grade. A conventional strip and spread footing foundation is being considered for the residence.

2.0 FIELD AND LABORATORY PROGRAMS

On June 22, 2016, three boreholes were drilled to depths of 5.7, 4.8, and 5.2 m below grade with a Becker Hammer rig. On July 7, 2016, two test pits were excavated to depths of 0.9 and 2.8 m below grade with a rubber tired excavator. In addition, three borehole logs from a previous investigation undertaken by ParklandGEO at the site in 2013 were referenced in the assessment. The locations of the boreholes and test pits are shown on Figures 2 and 3.

The soils encountered were visually examined and logged according to the Modified Unified Soil Classification System. Becker Penetration Tests (BPTs) were recorded at 0.3 m intervals in the three boreholes drilled with a Becker Hammer rig. Soil samples were taken at selected depths in the boreholes and test pits and returned to ParklandGEO's laboratory for testing to determine the soil properties. Testing included moisture contents, grain size distribution, plasticity, and water soluble sulphates.

Upon completion of drilling, 25 mm standpipes were installed in the boreholes. Groundwater level measurements were taken on May 16, 2013 and July 5, 2016. The ground surface elevations at the borehole and test pit locations were surveyed by ParklandGEO using a Trimble Geo7X GPS receiver and a Trimble Zephyr Model 2 GPS antenna. The estimated post data correction vertical accuracy of this equipment is +/- 10 cm. The elevations are referenced to a geodetic datum.

3.0 SUBSURFACE CONDITIONS

The soil profile encountered at the site was, in descending order: topsoil, clay till, gravel, sand and silt, and bedrock. The following is a brief description of the soil types encountered:

1. A 180 to 400 mm thick layer of surficial topsoil was encountered in five of the six boreholes and both of the test pits. The topsoil was organic, black, and damp to moist.

2. Glacial silty clay deposits (clay till) were encountered in all six boreholes and one of the test pits, and extended to depths ranging from 0.5 to 2.6 m below grade. These deposits were a mixture of clay and silt, with varying proportions of sand and gravel, and occasional rust stains, coal inclusions, cobbles, and boulders. The clay till was generally medium plastic and very stiff with moisture contents ranging from 7 to 19 percent. The clay till is expected to have an internal angle of friction of at least 29^{O} and a bulk unit weight of about 20.0 kN/m^3. The clay till will have a small amount of long term cohesive strength (estimated less than 5 kPa).

3. Tertiary gravel deposits were encountered in three of the six boreholes and extended to a depth of 2.5 m below grade in Borehole 1, and beyond the 2.1 m depths drilled in Boreholes 1A and 1C. The sandy gravel was generally fine grained and well graded, with frequent cobbles, occasional boulders, and moisture contents ranging from 1 to 5 percent. The BPT values ranged from 124 to 290 blows per 300 mm of penetration, indicating that these deposits were very dense. The gravel is expected to have an internal angle of friction of at least 38^{O} and a bulk unit weight of about 21.5 kN/m^3. These gravel deposits are considered typical in this upland area of Rocky View County.

4. Sand and silt deposits were encountered in four of the six boreholes and one of the test pits and extended to depths ranging from 0.5 to 3.4 m below grade. These deposits were generally fine grained and poorly graded, with sandstone inclusions, and moisture contents ranging from 5 to 14 percent. The BPT values ranged from 24 to 62 blows per 300 mm of penetration, indicating that these deposits were generally dense. The sand and silt is expected to have an internal angle of friction of at least 35^{O} and a bulk unit weight of about 21.0 kN/m^3.

5. Weathered bedrock was encountered in three of the six boreholes and both of the test pits at depths ranging from 0.5 to 3.4 m below grade. The bedrock was sedimentary in origin and consisted of sandstone and siltstone. The upper zone of the formation is considered to be weak, poorly cemented, and weathered rock, which generally has the density/consistency of a very dense/hard soil. The weathered bedrock is expected to have an internal angle of friction of at least 35^{O} and a bulk unit weight of about 22.0 kN/m^3. Residual bonding in the upper zone of the formation will provide an small amount of long term cohesive strength (estimated less than 10 kPa). Intact bedrock deeper within the formation expected to be well cemented resulting in much greater strength properties.

6. No groundwater seepage was observed in the boreholes and test pits during drilling and excavation. On May 16, 2013 and July 5, 2016, all of the boreholes were dry. The groundwater conditions at the site are expected to vary seasonally with peaks and possible perched conditions during periods of snow-melt and heavy or prolonged precipitation. Groundwater pressure and springs may be present in the bedrock at certain times of the year.

The detailed subsurface conditions encountered at the borehole and test pit locations are described on the attached logs. The soil test results and definitions of the terminology and symbols used on the logs are provided on the attached explanation sheets.

4.0 SLOPE ASSESSMENT

Slope stability analysis was conducted to assess the slope below the proposed residence. Rocky View County development guidelines allow unrestricted development on sites where slopes are no steeper than about 6.5H:1V (15 percent). This limit is set as a flag to trigger a site specific slope stability assessments for proposed developments. The slope below the proposed residence is about 50 to 70 m high and up to about 3.0H:1V (33 percent) steep.

Slope stability is described in terms of a factor of safety (FS) against slope failure which is the ratio of total forces resisting failure divided by the sum of forces promoting failure. In general, a FS of less than 1 indicates that failure is expected and a FS of more than 1 indicates that the slope is stable. A steepened slope will slump back over time to establish a stable profile for the existing soil and groundwater conditions. The FS of a slope will increase slightly as vegetation is established on the face to protect the subgrade soil from weathering. Given the possibility of soil variation, groundwater fluctuation, erosion, and other factors, slopes with a FS ranging between 1.0 and 1.5 are considered to be marginally stable and a “long term” stable slope is considered to have a FS of over 1.5.

A FS of at least 1.5 is desired for the critical failure surface intersecting any proposed top-of-slope or slope face development. The critical failure surface is the estimated failure surface with the lowest calculated FS intersecting the development.

4.1 SLOPE OBSERVATIONS AND AERIAL PHOTO REVIEW

On July 27, 2016, Bartek Ryczywolski, P.Eng., of ParklandGEO visited the site to visually inspect the slope below the proposed residence. The slope face on the property was stripped of topsoil and a recently constructed dry detention pond was present in the southwest corner of the property. The natural slope to the west of the property was vegetated with native grasses and brush, and partially treed. Bedrock outcrops and an erosional channel were also present on the natural slope face. Photographs of the slope are shown on Figures 9 and 10.

Based on visual observations, there was no evidence of deep-seated movement or slumping of the slope face. There were also no signs of springs or other natural groundwater features on the slope face which might impact the slope. However, the possibility of seasonal seeps or springs cannot be totally discounted under all conditions. The slope crest was very rounded indicating that the slope is relatively mature.

Based on a review of historical aerial photographs from 1949, 1966, 1979, 2000, 2008 and 2016, there was no evidence of former distress or landslide activity and the slope appeared to be stable. Natural drainage features and other indications of erosion were visible in the aerial photographs.

4.2 CROSS SECTIONAL PROFILES

Four cross sectional profiles were surveyed by ParklandGEO at the locations shown on the Contour Plan, Figure 3. The locations of the profiles were chosen based on site reconnaissance and a review of the topographic plan of the site provided by McDowell & Associates Inc.

4.3 SLOPE SOIL PROFILES

An idealized soil profile was developed for the stability analysis of each cross sectional profile. The soil profiles were inferred from the soils encountered at the borehole and test pit locations. A partially saturated slope face, representative of perched groundwater in the upper soils was considered in the analysis. The soil profiles are shown on Figures 4 to 7.

4.4 STABILITY ANALYSIS

The stability analysis was carried out using the *Geostudio 2012 Slope/W* computer program to evaluate the factors of safety for the representative slope profiles. The FS was calculated using the Morgenstern-Price Method and a variety of assumed parameters. The following soil parameters were estimated:

TABLE 1
SOIL PARAMETERS FOR STABILITY ANALYSIS

Soil	Unit Weight (kN/m^3)	Cohesion, c' (kPa)	Phi' (Degrees)
Clay Till	20.0	2 - 5	29
Gravel	21.5	0	38
Sand and Silt	21.0	0	35
Weathered Bedrock	22.0	5 - 10	35

For long term stability, effective soil parameters and a predicted long term pore pressure/ groundwater condition were used in the analysis. Pore pressure/groundwater conditions were modelled by using the pore pressure ratio (Ru), where Ru = 0 represents a fully drained slope and Ru = 0.5 represents a fully saturated slope.

The first stage of the analysis was to model the slope stability under unsaturated conditions represented by an Ru < 0.2. For long term stability, it was assumed that the stability of the slope would be adversely affected by a saturated slope face simulated by an Ru of 0.4 to 0.5. This saturated condition is typical to possible weather and development impacts such as; heavy snow melt/precipitation, landscape watering, and possible service leaks or pipe breaks. A number of failure surfaces from the analysis are shown on Figures 4 to 7.

4.5 STABILITY ASSESSMENT

Based on the present slope configuration, vegetation cover, and soil moisture condition, the slope below the proposed residence appears to be stable with a long term FS of more than 1.5. The FS against a small shallow slump-type failure might fall to about 1.0 if the slope face were allowed to become saturated or over-steepened. The FS of the failure surface intersecting the proposed residence is more than 3.0, which is considered to be very stable and acceptable for a permanent structure.

Based on site observations and a review of historical aerial photographs, there was no evidence of deep-seated movement or slumping of the slope face, suggesting that the slope is mature and has not been subject to sliding in recent history. Saturation or over-steepening of the upper soils, leading to shallow slumping is considered to be the most likely mode of slope failure at this site.

5.0 SLOPE RECOMMENDATIONS

The residence has been proposed at the crest of a southwest-facing slope. The construction of the residence is not expected to have a significant impact on the stability of the slope. The potential for a major slope movement is very low under present normal conditions with reasonable variation.

Any site grading or stock piling on or near the slope should not be undertaken without a detailed review by a qualified geotechnical engineer. Any proposal to move the proposed location of the residence should also be reviewed.

6.0 GENERAL SLOPE CARE

As discussed above, the slope face may be subject to minor surficial slumping. Slope face stability is influenced by precipitation, surface erosion, groundwater, and soil moisture conditions. In order to reduce the possibility of surficial slumping, the slope should be kept well vegetated. It is very important that site development does not initiate any detrimental changes to the subsurface conditions and slope geometry. The following general recommendations are provided:

1. Permanent removal of vegetation from the slope is not recommended and the growth of new vegetation is encouraged. New vegetation for this site should be selected from native species with deep root systems that can grow with a minimum of watering.

2. It is recommended that exposed soils be vegetated soon after site grading is complete. Leaving graded areas of the site unvegetated for extended periods of time will cause increased infiltration into the slope, resulting in the saturation of the upper soils.

3. Erosion control measures should be implemented as necessary. If required, features to carry concentrated flows over the crest should be engineered.

4. If underground sprinklers, decorative water features, or swimming pools are proposed, they should be properly designed in consultation with qualified engineers and should be provided with leak detection and control systems.

5. Excessive watering of vegetated areas and trees on or near the slope should be avoided.

6. Under no circumstances should fill or construction debris be disposed of over the slope crest or on the slope face.

7. Discharge from roof leaders and weeping tile systems should be directed away from the slope.

The general recommendations in this section are common sense actions to undertake or avoid in order to minimize potential disturbance to the slope. These recommendations are not considered to be essential to the safety of the proposed development, but it is considered prudent to follow these recommendations to maintain a low risk to the development. These general recommendations may be subject to site specific modifications based on a review by a qualified geotechnical engineer.

7.0 CLOSURE

This report is based on the findings in six boreholes and two test pits, soil testing, site reconnaissance, and a review of available information. If new information or different subsoil and groundwater conditions are encountered, this office must be notified and recommendations submitted herein will be reviewed and revised as required. This report has been prepared for the exclusive use of **McDowell & Associates Inc.**, and their approved agents, for the specified application to the proposed residence at 242253 Westbluff Road, in Rocky View County, Alberta. It has been prepared in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made. Use of this report is subject to acceptance of the attached General Terms, Conditions and Limitations.

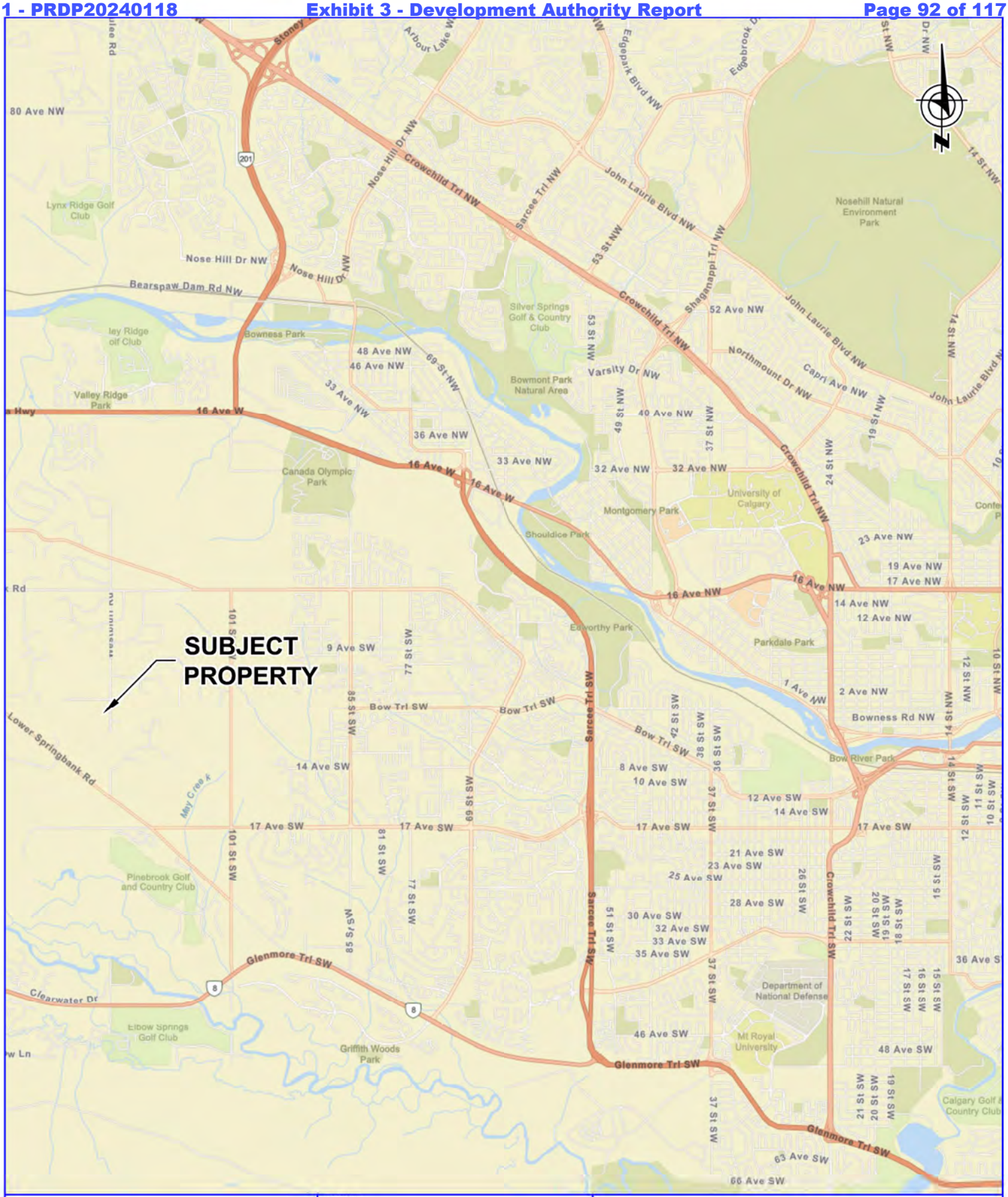
We trust that this information meets with your present requirements. If you have any questions please contact our office.

Respectfully submitted,
PARKLAND GEOTECHNICAL CONSULTING LTD.
APEGA Permit #07312

Bartek Ryczywolski, P.Eng.
Geotechnical Engineer

Reviewed By:
Ramon Facundo, P.Eng.

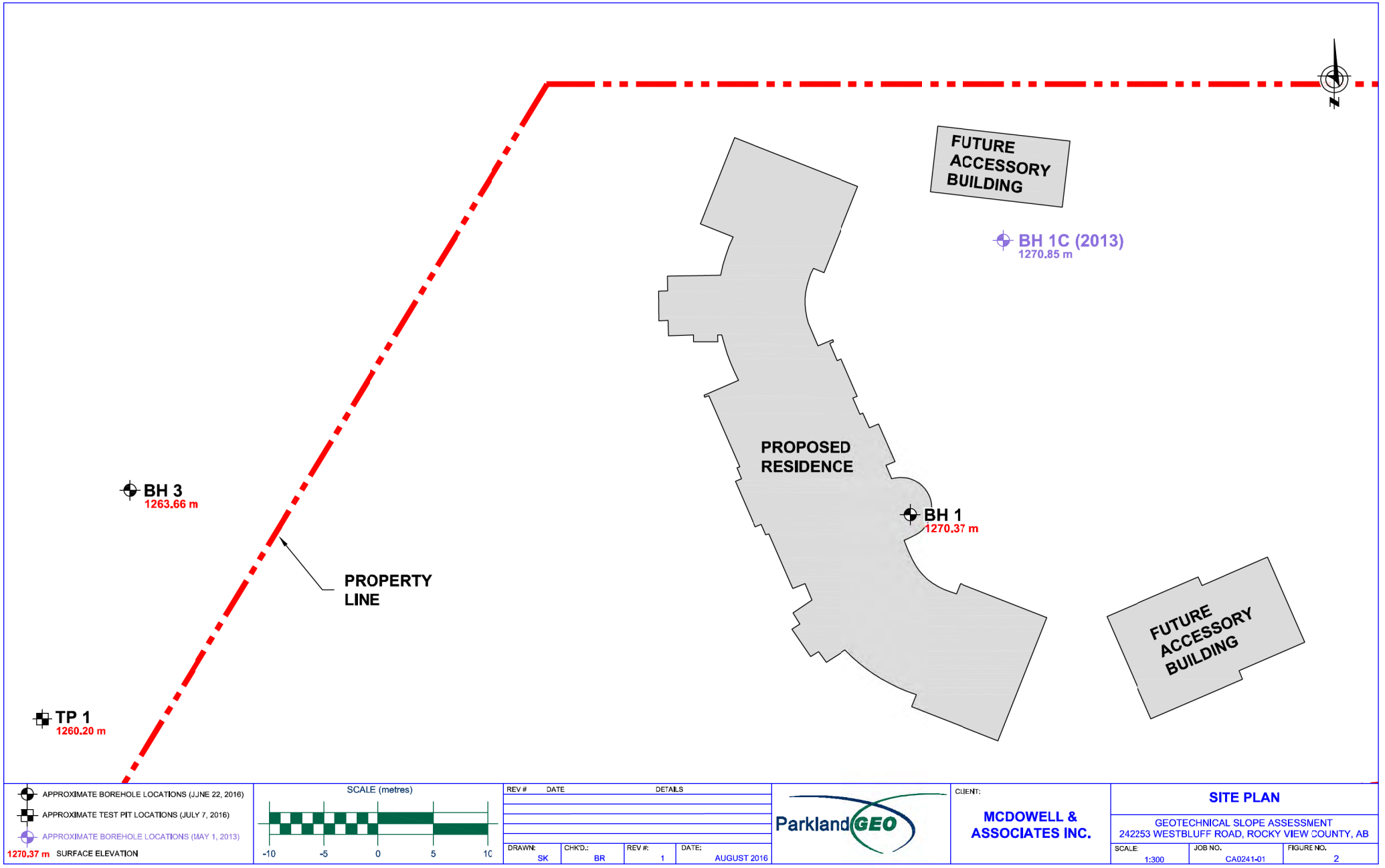
attach / Figure 1 - Key Plan
Figure 2 - Site Plan
Figure 3 - Contour Plan
Figures 4 to 7 - Slope Profiles A to D
Figure 8 - 2016 Aerial Photograph
Figures 9 and 10 - Site Photographs
Borehole and Test Pit Logs
Soil Test Results
Explanation of Terms and Symbols
General Terms, Conditions and Limitations

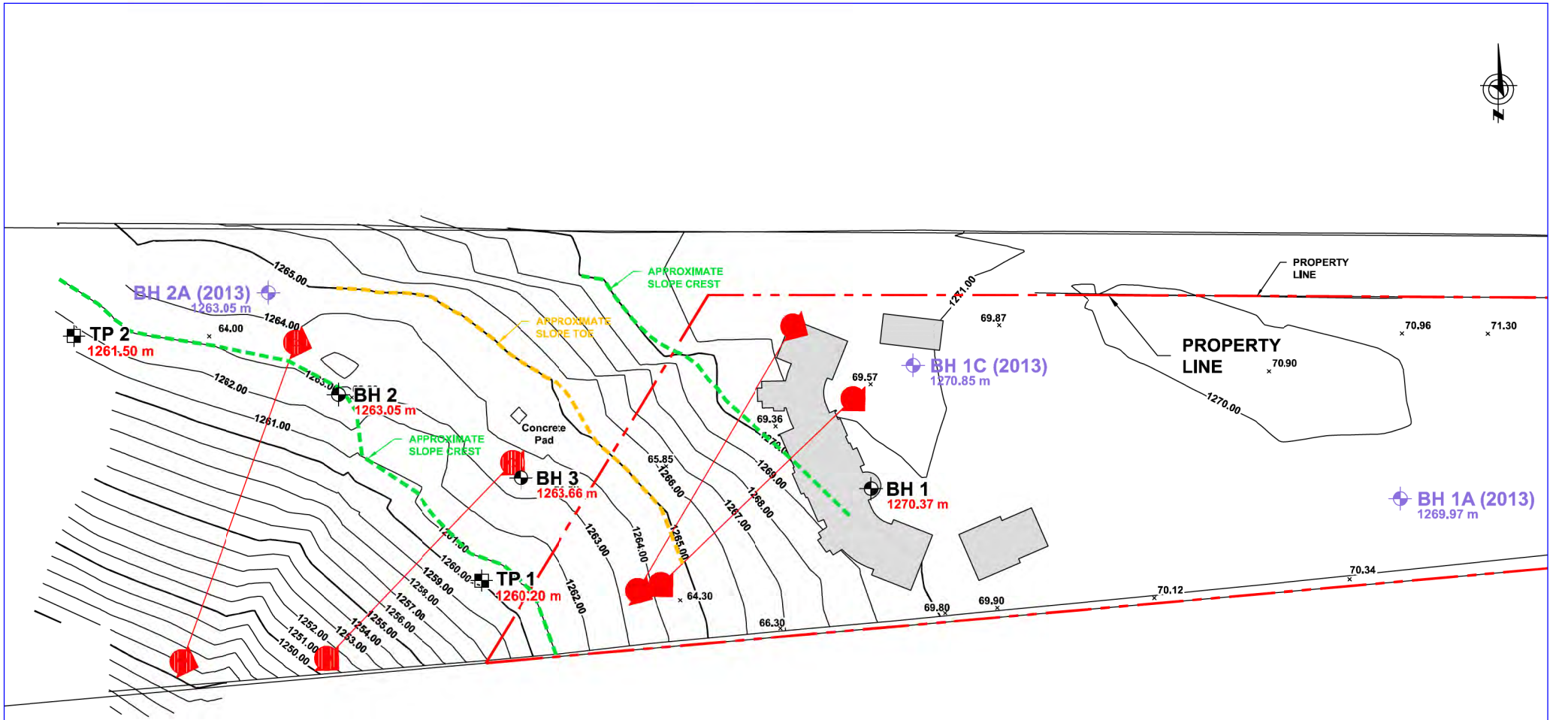


ParklandGEO	CLIENT: MCDOWELL & ASSOCIATES INC.	KEY PLAN

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016
SCALE: NTS	JOB NO. CA0241-01		FIGURE NO. 1


FUTURE ACCESSORY BUILDING
BH 1C (2013)
1270.85 m
PROPOSED RESIDENCE
BH 1
1270.37 m
BH 3
1263.66 m
PROPERTY LINE
TP 1
1260.20 m
FUTURE ACCESSORY BUILDING
APPROXIMATE BOREHOLE LOCATIONS (JUNE 22, 2016)
APPROXIMATE TEST PIT LOCATIONS (JULY 7, 2016)
APPROXIMATE BOREHOLE LOCATIONS (MAY 1, 2013)
1270.37 m SURFACE ELEVATION
SCALE (metres)
-10 -5 0 5 10
REV # DATE DETAILS
DRAWN: SK
CHK'D.: BR
REV #: 1
DATE: AUGUST 2016
Parkland GEO
CLIENT:
MCDOWELL & ASSOCIATES INC.
SITE PLAN
GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB
SCALE: 1:300
JOB NO. CA0241-01
FIGURE NO. 2



APPROXIMATE BOREHOLE LOCATIONS (JUNE 22, 2016)
APPROXIMATE TEST PIT LOCATIONS (JULY 7, 2016)
APPROXIMATE BOREHOLE LOCATIONS (MAY 1, 2013)
1270.37 m SURFACE ELEVATION

SCALE (metres)
-10 0 10 20 40

REV #	DATE	DETAILS

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

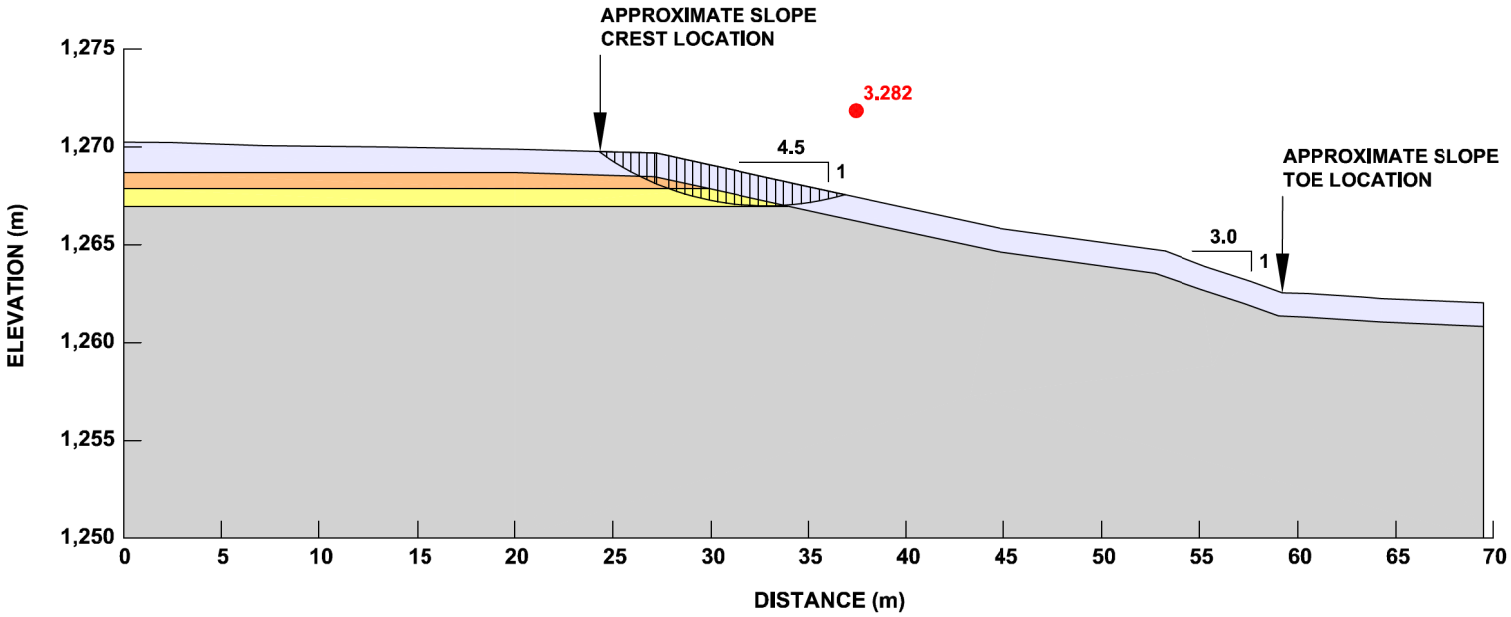
Parkland GEO

CLIENT:
MCDOWELL & ASSOCIATES INC.

CONTOUR PLAN

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

SCALE:	JOB NO.	FIGURE NO.
1:750	CA0241-01	3



SOIL PARAMETERS FOR STABILITY ANALYSIS			
SOIL TYPE	UNIT WEIGHT (kN/m³)	COHESION (kPa)	PHI (°)
CLAY TILL	20.0	2	29
GRAVEL	21.5	0	38
SAND AND SILT	21.0	0	35
WEATHERED BEDROCK	22.0	5	35

REV #	DATE	DETAILS

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

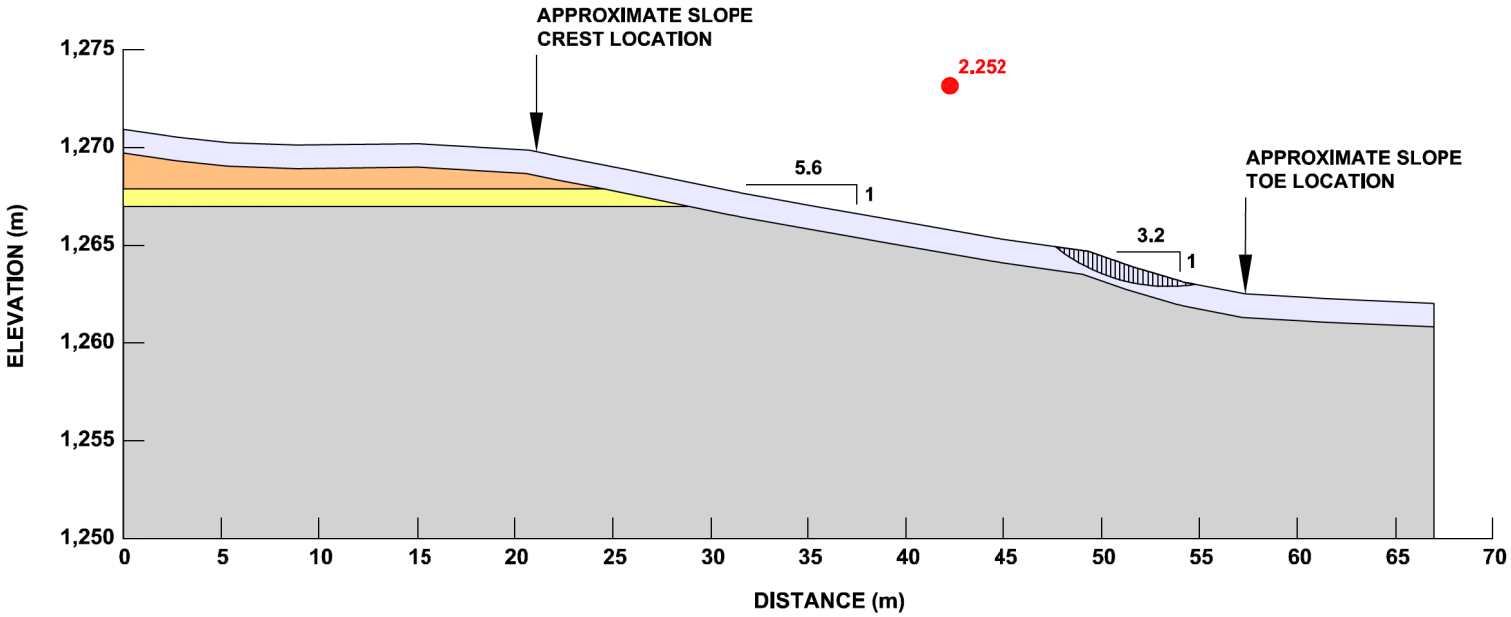
Parkland GEO

CLIENT:
MCDOWELL & ASSOCIATES INC.

SLOPE PROFILE A

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

SCALE:	JOB NO.	FIGURE NO.
AS SHOWN	CA0241-01	4



SOIL PARAMETERS FOR STABILITY ANALYSIS			
SOIL TYPE	UNIT WEIGHT (kN/m³)	COHESION (kPa)	PHI (°)
CLAY TILL	20.0	2	29
GRAVEL	21.5	0	38
SAND AND SILT	21.0	0	35
WEATHERED BEDROCK	22.0	5	35

REV #	DATE	DETAILS

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

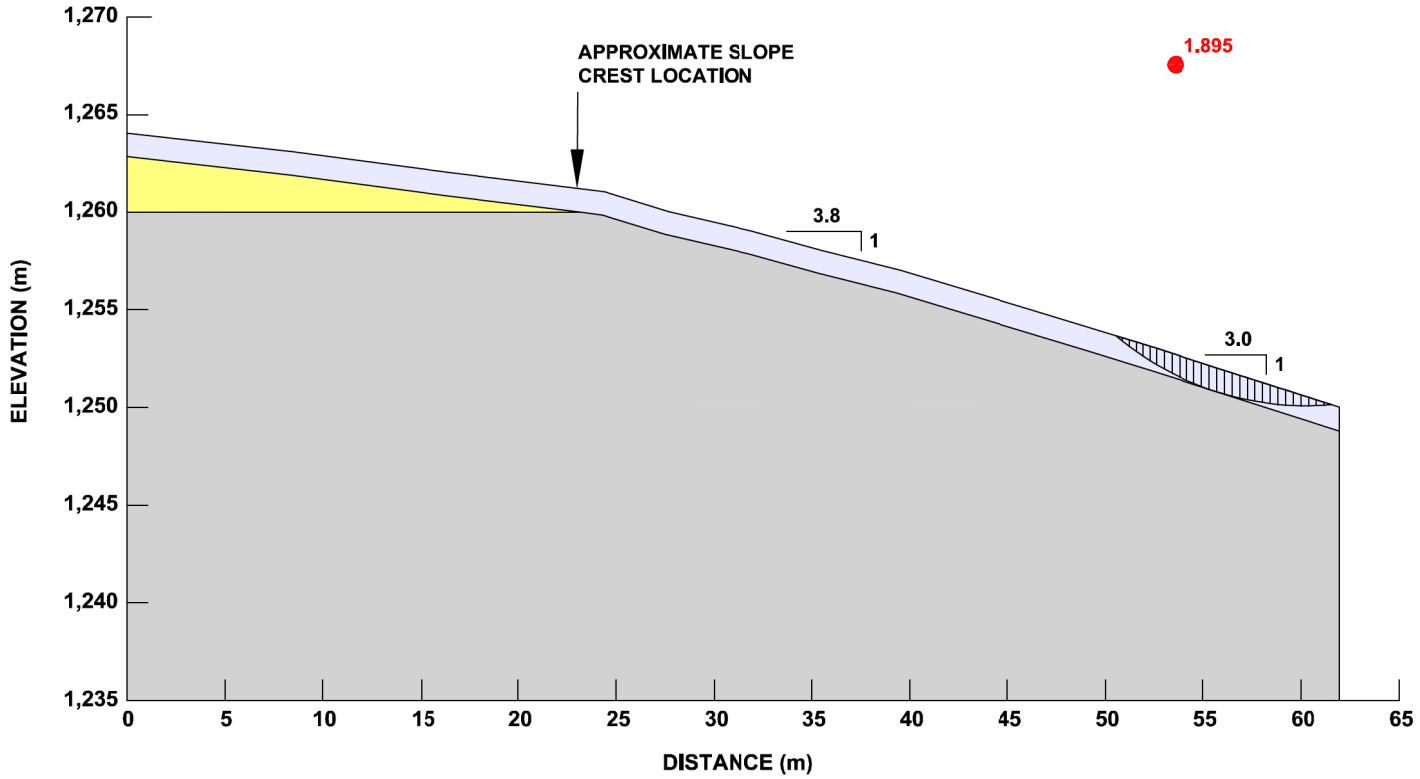
Parkland GEO

CLIENT:
MCDOWELL & ASSOCIATES INC.

SLOPE PROFILE B

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

SCALE:	JOB NO.	FIGURE NO.
AS SHOWN	CA0241-01	5



SOIL PARAMETERS FOR STABILITY ANALYSIS			
SOIL TYPE	UNIT WEIGHT (kN/m³)	COHESION (kPa)	PHI (°)
CLAY TILL	20.0	2	29
GRAVEL	21.5	0	38
SAND AND SILT	21.0	0	35
WEATHERED BEDROCK	22.0	5	35

REV #	DATE	DETAILS

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

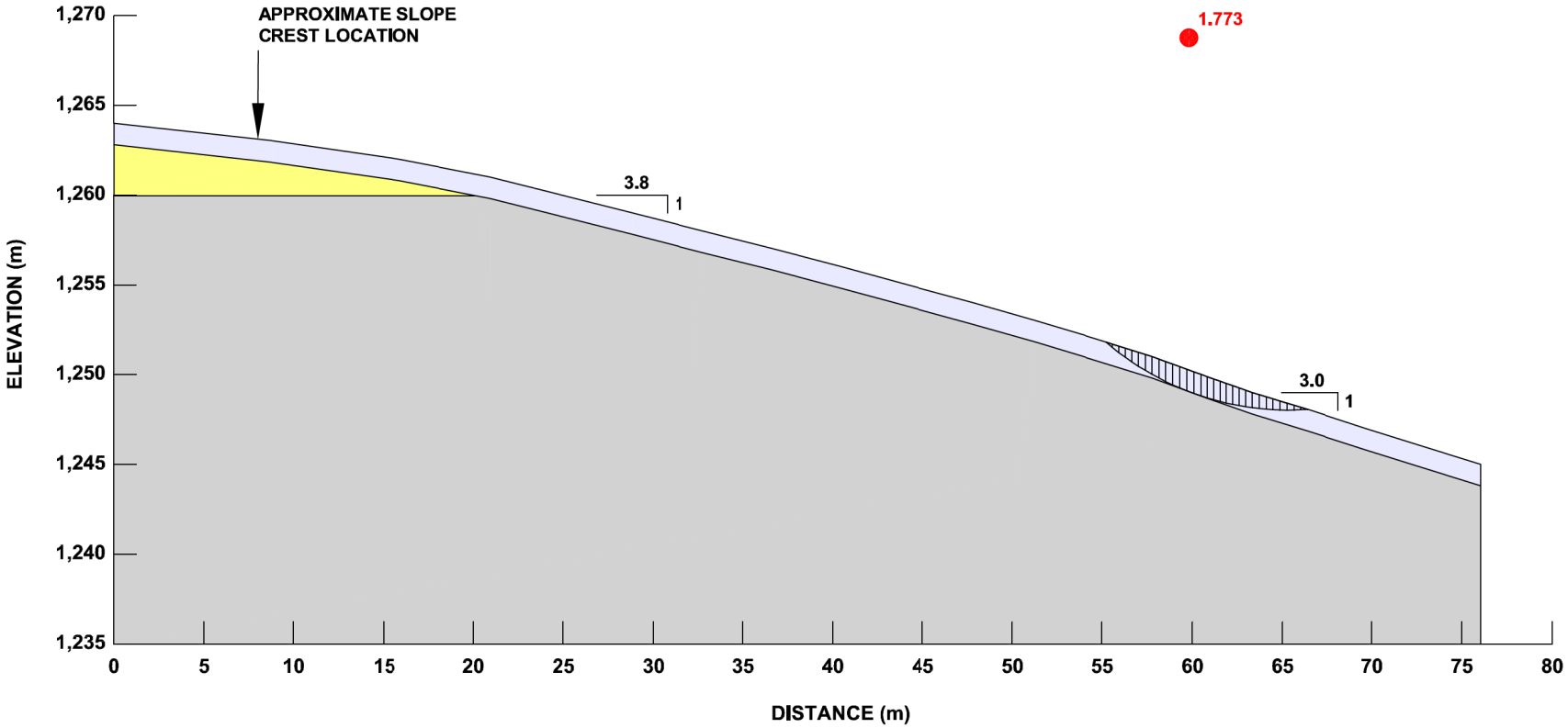
Parkland GEO

CLIENT:
MCDOWELL & ASSOCIATES INC.

SLOPE PROFILE C

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

SCALE:	JOB NO.	FIGURE NO.
AS SHOWN	CA0241-01	6



SOIL PARAMETERS FOR STABILITY ANALYSIS			
SOIL TYPE	UNIT WEIGHT (kN/m³)	COHESION (kPa)	PHI (°)
CLAY TILL	20.0	2	29
GRAVEL	21.5	0	38
SAND AND SILT	21.0	0	35
WEATHERED BEDROCK	22.0	5	35

REV #	DATE	DETAILS

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

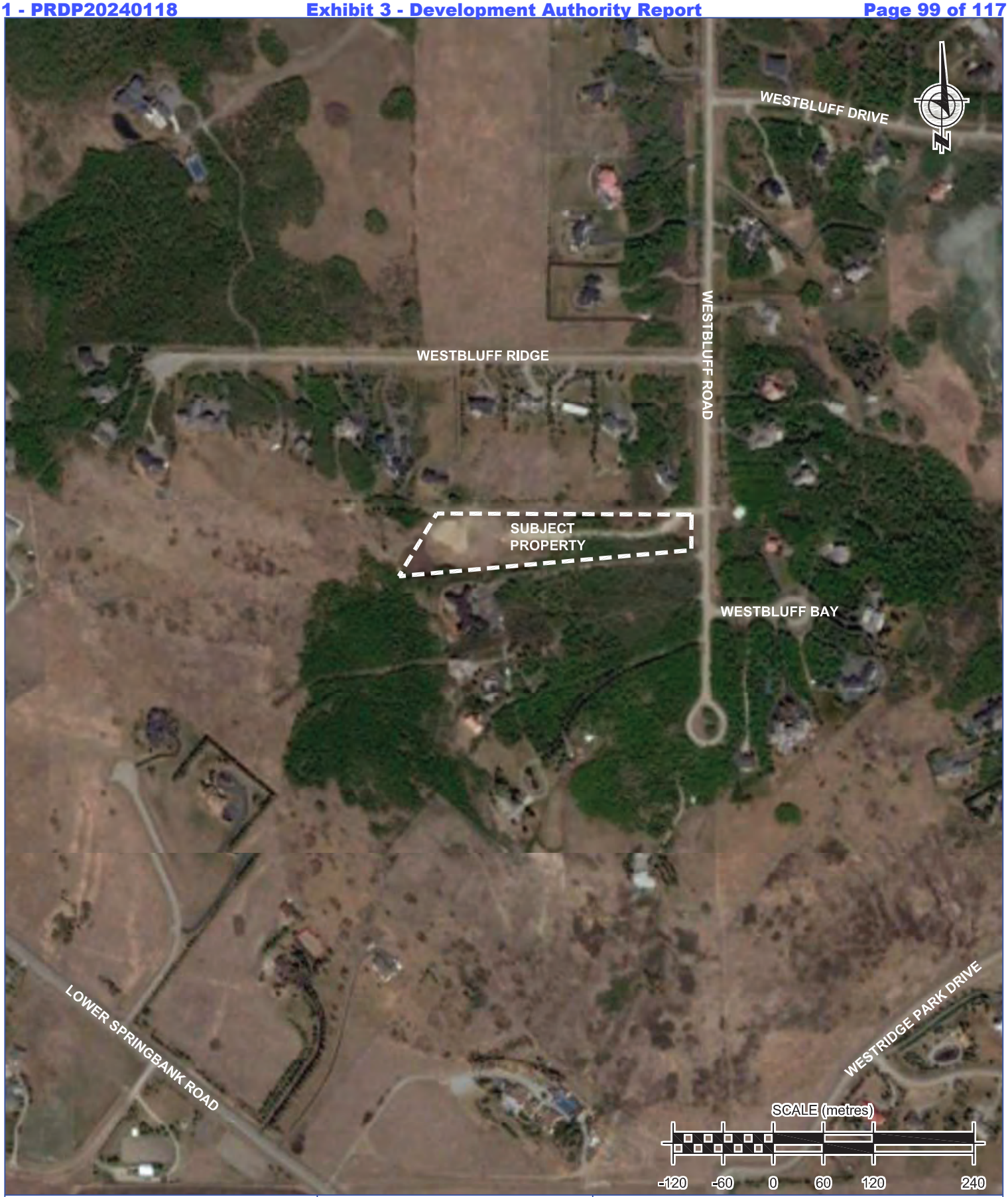
Parkland GEO

CLIENT:
MCDOWELL & ASSOCIATES INC.

SLOPE PROFILE D

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

SCALE:	JOB NO.	FIGURE NO.
AS SHOWN	CA0241-01	7



Parkland GEO

CLIENT:

MCDOWELL & ASSOCIATES INC.

2016 AERIAL PHOTOGRAPH

GEOTECHNICAL SLOPE ASSESSMENT
242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB

DRAWN:	CHK'D.:	REV #:	DATE:
SK	BR	1	AUGUST 2016

SCALE:	JOB NO.	FIGURE NO.
1:6000	CA0241-01	8

June 22, 2016 - Location of proposed residence. Facing west.

June 22, 2016 - Geotechnical drilling of Borehole 1. Facing southeast.

ParklandGEO	CLIENT: MCDOWELL & ASSOCIATES INC.	SITE PHOTOGRAPHS		
		GEOTECHNICAL SLOPE ASSESSMENT 242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB		
		DRAWN: SK	CHK'D.: BR	REV #: 1	DATE: AUGUST 2016
		SCALE:	JOB NO. CA0241-01	FIGURE NO. 9	

July 27, 2016 - Slope below the proposed residence. Facing southeast.

July 27, 2016 - Treed slope face. Facing southeast.

ParklandGEO	CLIENT: MCDOWELL & ASSOCIATES INC.	SITE PHOTOGRAPHS		
		GEOTECHNICAL SLOPE ASSESSMENT 242253 WESTBLUFF ROAD, ROCKY VIEW COUNTY, AB		
		DRAWN: SK	CHK'D.: BR	REV #: 1	DATE: AUGUST 2016
		SCALE:	JOB NO. CA0241-01	FIGURE NO. 10	

Parkland GEO

BOREHOLE NO.: 1

CLIENT: McDowell & Associates Inc.
SITE: 242253 Westbluff Road
NOTES: Geotechnical Slope Assessment

PROJECT NO.: CA0241
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture Content (Wp |--X--| Wl) 15 45	Type	Sample No	Blow Count BPT 75 225	Comments	Well Completion Details	Elevation (m)
0	GROUND SURFACE								1270.37
	Till Clay, silty, little gravel, trace sand, stiff, medium plastic, brown, occasional cobbles, occasional rust stains, occasional coal inclusions, moist.		2	G	1G1	10, 268, 290			1269.87
1	***Gravel*** Sandy, trace silt, very dense, fine grained, well graded, grey, frequent cobbles, occasional boulders, damp.		1	G	1G2	197, 124			
			1	G	1G3	216, 225	Grain Size Analysis: Gravel = 67 % Sand = 29 % Silt & Clay = 4 %		
2						148			
				G	1G4	55, 38, 33	Grain Size Analysis: Gravel = 11 % Sand = 20 % Silt = 43 % Clay = 26 % SO_4 < 0.10 %		1267.87
3	***Sand and Silt*** Little to some clay, trace gravel, dense, fine grained, poorly graded, brown, occasional rust stains, damp.		6						
			9	G	1G5	97, 153			1266.97
4	***Weathered Bedrock*** Siltstone, hard, brown, occasional rust stains, damp.		8	G	1G6	77, 165			
						144			
5			9	G	1G7	111, 126			
			8	G	1G8	>300			1264.67
6	Refusal at 5.7 m. 25 mm standpipe installed. Backfilled with soil. Dry upon completion. Dry on July 5, 2016.								
7									
8									

Well Completion Details: SOLID PVC PIPE; SLOTTED PVC PIPE; BACKFILLED WITH SOIL

LOGGED BY: BR
CONTRACTOR: Great West Drilling Ltd.
RIG/METHOD: Truck Mount / Becker Hammer
DATE: June 22, 2016
CALIBRATION:

GROUND ELEVATION: 1270.37 m
NORTHING:
EASTING:

Parkland GEO

BOREHOLE NO.: 2

CLIENT: McDowell & Associates Inc.
SITE: 242259 Westbluff Road
NOTES: Geotechnical Slope Assessment

PROJECT NO.: CA0241
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture Content (Wp |--X--| Wl) 15 45	Type	Sample No	Blow Count BPT 75 225	Comments	Well Completion Details	Elevation (m)
0	GROUND SURFACE								1263.05
	Topsoil (200 mm) Organic, black, damp.					11			1262.85
	Till Clay, silty, some gravel, trace sand, very stiff, medium plastic, brown, occasional cobbles, occasional rust stains, occasional coal inclusions, moist.		8	G	2G1	18, 19, 40, 42			1262.05
	Sand Silty, little to some clay, trace gravel, dense, fine grained, poorly graded, brown, sandstone inclusions, occasional cobbles, damp.		5	G	2G2	35, 44, 62			
			5	G	2G3	36, 39, 85	Grain Size Analysis: Gravel = 12 % Sand = 34 % Silt = 29 % Clay = 25 % SO_4 < 0.10 %		
	Weathered Bedrock Sandstone, very dense, brown, damp.		5	G	2G4	84, 100			1259.95
			5	G	2G5	137, 133			
			6	G	2G6	>300			1258.25
	Refusal at 4.8 m. 25 mm standpipe installed. Backfilled with soil. Dry upon completion. Dry on July 5, 2016.							SOLID PVC PIPE; SLOTTED PVC PIPE; BACKFILLED WITH SOIL	

LOGGED BY: BR
CONTRACTOR: Great West Drilling Ltd.
RIG/METHOD: Truck Mount / Becker Hammer
DATE: June 22, 2016
CALIBRATION:

GROUND ELEVATION: 1263.05 m
NORTHING:
EASTING:

Parkland GEO

BOREHOLE NO.: 3

CLIENT: McDowell & Associates Inc.
SITE: 242259 Westbluff Road
NOTES: Geotechnical Slope Assessment

PROJECT NO.: CA0241
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture Content (Wp |--X--| Wl) 15 45	Type	Sample No	Blow Count BPT 75 225	Comments	Well Completion Details	Elevation (m)
0	GROUND SURFACE								1263.66
	Topsoil (180 mm) Organic, black, damp.					10			1263.48
1	***Till*** Clay, silty, some gravel, trace sand, very stiff, medium plastic, brown, occasional cobbles, occasional rust stains, occasional coal inclusions, moist.					28, 20, 21, 26			1262.46
2	***Sand*** Silty, little to some clay, trace gravel, compact, fine grained, poorly graded, brown, sandstone inclusions, occasional cobbles, damp.		6	G	3G1	24, 34, 39	Grain Size Analysis: Gravel = 1 % Sand = 45 % Silt = 33 % Clay = 21 %		
3	***Weathered Bedrock*** Sandstone, very dense, brown, damp.		3	G	3G2	89, 133, 240			1261.16
			2	G	3G3	70, >300			
4			3	G	3G4	91, 102, 93			
5			3	G	3G5	>300			1258.46
	Refusal at 5.2 m. 25 mm standpipe installed. Backfilled with soil. Dry upon completion. Dry on July 5, 2016.							SOLID PVC PIPE; SLOTTED PVC PIPE; BACKFILLED WITH SOIL	
6									
7									
8									

LOGGED BY: BR
CONTRACTOR: Great West Drilling Ltd.
RIG/METHOD: Truck Mount / Becker Hammer
DATE: June 22, 2016
CALIBRATION:

GROUND ELEVATION: 1263.66 m
NORTHING:
EASTING:

Parkland GEO

CLIENT: McDowell & Associates Inc.
SITE: 242259 Westbluff Road
NOTES: Geotechnical Slope Assessment

TESTPIT NO.: 1
PROJECT NO.: CA0241
TP LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture (Wp |-----X-----| Wl) 25 50 75	Type	Sample No	Comments	Elevation (m)
0	GROUND SURFACE						1260.20
	Topsoil (320 mm) Organic, black, moist.						
							1259.88
	Sand Silty, little clay, dense, fine grained, poorly graded, brown, sandstone inclusions, moist.		14	G	1G1		1259.70
	Weathered Bedrock Sandstone, very dense, brown, damp.		10	G	1G2		1259.30
1	Refusal at 0.9 m. Backfilled with soil. Dry upon completion.						
2							
3							
4							
5							

LOGGED BY: BR
CONTRACTOR: B&M Trenching Ltd.
METHOD: Rubber Tire Excavator
DATE: July 7, 2016
CALIBRATION:

GROUND ELEVATION: 1260.20 m
NORTHING:
EASTING:

Parkland GEO

CLIENT: McDowell & Associates Inc.
SITE: 242259 Westbluff Road
NOTES: Geotechnical Slope Assessment

TESTPIT NO.: 2
PROJECT NO.: CA0241
TP LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture (Wp |-----X-----| Wl) 25 50 75	Type	Sample No	Comments	Elevation (m)
0	GROUND SURFACE						1261.50
	Topsoil (260 mm) Organic, black, moist.						1261.24
	Till Clay, silty, some sand, little gravel, very stiff, low to medium plastic, brown, occasional cobbles, occasional boulders, occasional rust stains, occasional coal inclusions, moist.		12	G	2G1		
1			11	G	2G2		
			11	G	2G3		
2			11	G	2G4		
			12	G	2G5		1258.90
	Weathered Bedrock Sandstone, very dense, brown, occasional rust stains, damp.		9	G	2G6		1258.70
3	End of test pit at 2.8 m. Backfilled with soil. Dry upon completion.						
4							
5							

LOGGED BY: BR
CONTRACTOR: B&M Trenching Ltd.
METHOD: Rubber Tire Excavator
DATE: July 7, 2016
CALIBRATION:

GROUND ELEVATION: 1261.50 m
NORTHING:
EASTING:

ParklandGEO

CLIENT: Ms. Wendy Partridge
SITE: Partridge Parcel
NOTES:

BOREHOLE NO.: 1A

PROJECT NO.: CA0004-REV
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture (Wp |-----X-----| Wl) 25 50 75	Type	Sample No	SPT (N)	Comments	Well Completion Details	Elevation (m)
0	GROUND SURFACE								1269.97
	Topsoil (270 mm) Organic, black, moist.								
	Till Clay, silty, little gravel, trace sand, very stiff, medium plastic, brown, occasional cobbles, occasional rust stains, occasional coal inclusions, moist.		19		1AU1		Grain Size Analysis: Gravel = 14 % Sand = 5 % Silt = 39 % Clay = 42 %		1269.70
					1AU2				1269.21
1	***Gravel*** Sandy, trace silt, dense, fine grained, well graded, grey, occasional cobbles, occasional boulders, damp. - frequent cobbles, very dense at 1.2 m.		3	G	1AG3				1268.77
2			5	G	1AG4				1267.87
	Auger refusal at 2.1 m. 25 mm standpipe installed. Backfilled with auger cuttings. Slough to 1.5 m. Dry upon completion. Dry on May 16, 2013. Dry on July 5, 2016.							SLOUGH / SLOTTED / SOLID PVC PIPE / AUGER CUTTINGS / SLOUGH	
3									
4									
5									

LOGGED BY: BR
CONTRACTOR: Earth Drilling Co. Ltd.
RIG/METHOD: Truck Mount / Solid Stem Auger
DATE: May 1, 2013
CALIBRATION:

GROUND ELEVATION: 1269.97 m
NORTHING:
EASTING:

ParklandGEO

CLIENT: Ms. Wendy Partridge
SITE: Partridge Parcel
NOTES:

BOREHOLE NO.: 1C

PROJECT NO.: CA0004-REV
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture (Wp |-----X-----| Wl) 25 50 75	Type	Sample No	SPT (N)	Comments	Well Completion Details	Elevation (m)
	GROUND SURFACE								1270.85
0	***Topsoil (280mm)*** Organic, black, moist.				1CU1				1270.57
	Till Clay, silty, some gravel, trace sand, very stiff, medium plastic, brown, occasional cobbles, occasional boulders, occasional rust stains, occasional coal inclusions, moist.		10		1CU2		Grain Size Analysis: Gravel = 21 % Sand = 7 % Silt = 34 % Clay = 38 % SO_4 < 0.10 %		
1					1CU3				1269.65
	Gravel Sandy, trace to little silt, very dense, fine grained, well graded, grey, occasional cobbles, occasional boulders, damp. - frequent cobbles at 1.8 m.		3	G	1CG4		Grain Size Analysis: Gravel = 48 % Sand = 35 % Silt & Clay = 17 % SO_4 < 0.10 %		1269.05
2	Auger refusal at 2.1 m. 25 mmstandpipe installed. Backfilled with auger cuttings. Dry upon completion. Dry on May 16, 2013. Standpipe destroyed on July 5, 2016.							SOLID PVC PIPE SLOTTED BACKFILLED WITH AUGER CUTTINGS	1268.75
3									
4									
5									

LOGGED BY: BR
CONTRACTOR: Earth Drilling Co. Ltd.
RIG/METHOD: Truck Mount / Solid Stem Auger
DATE: May 1, 2013
CALIBRATION:

GROUND ELEVATION: 1270.85 m
NORTHING:
EASTING:

Parkland GEO

CLIENT: Ms. Wendy Partridge
SITE: Partridge Parcel
NOTES:

BOREHOLE NO.: 2A

PROJECT NO.: CA0004-REV
BH LOCATION:

SUBSURFACE PROFILE

Depth (m)	Description	Symbol	Moisture (Wp |-----X-----| Wl) 25 50 75	Type	Sample No	SPT (N)	Comments	Well Completion Details	Elevation (m)
0	GROUND SURFACE								1264.35
	Topsoil (400mm) Organic, black, moist.				2AU1				1263.95
	Till Clay, silty, little gravel, trace sand, very stiff, low to medium plastic, brown, occasional cobbles, occasional boulders, occasional rust stains, occasional coal inclusions, moist.		12		2AU2				
1					2AU3		Grain Size Analysis: Gravel = 1 % Sand = 2 % Silt = 41 % Clay = 56 %		
					2AU4				
					2AD1	19			
2			7						1262.25
	Sand Silty, little clay, trace gravel, dense, fine grained, poorly graded, brown, sandstone inclusions, damp.			G	2AG3				
			7						1261.35
3	End of hole at 3.0 m. 25 mm standpipe installed. Backfilled with auger cuttings. Dry upon completion. Dry on May 16, 2013. Dry on July 5, 2016.								
4									
5									

SOLID PVC PIPE
SLOTTED PVC PIPE
BACKFILLED WITH AUGER CUTTINGS

LOGGED BY: BR
CONTRACTOR: Earth Drilling Co. Ltd.
RIG/METHOD: Truck Mount / Solid Stem Auger
DATE: May 1, 2013
CALIBRATION:

GROUND ELEVATION: 1264.35 m
NORTHING:
EASTING:

SIEVE PARTICLE-SIZE ANALYSIS

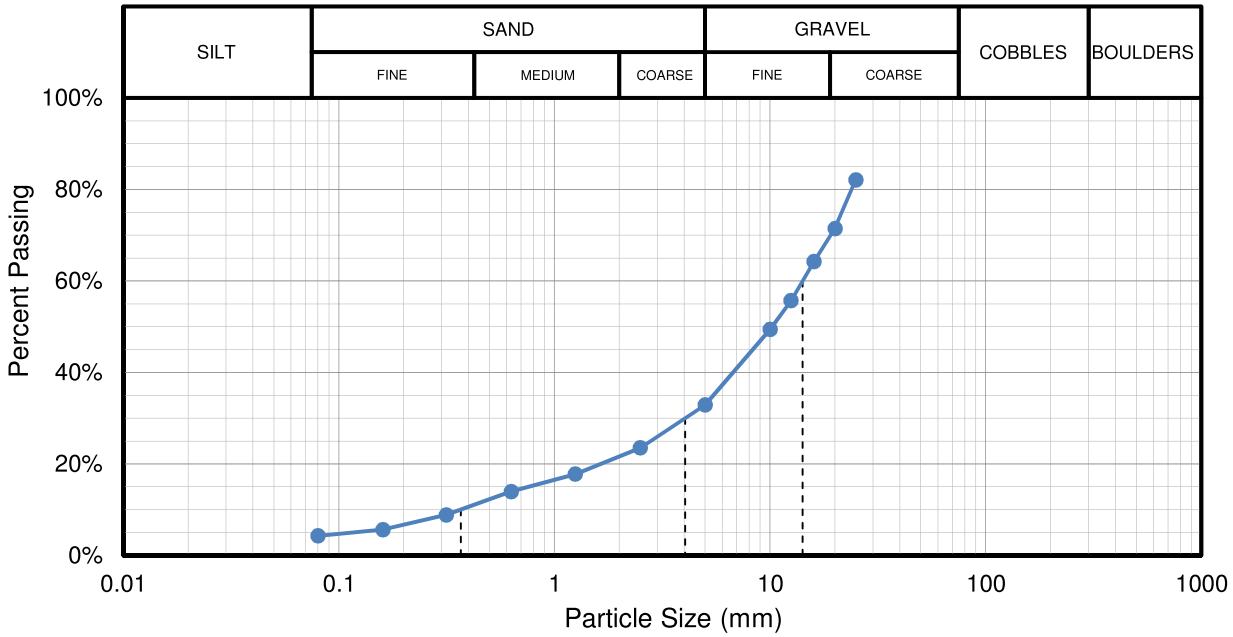
ASTM C136

PROJECT: Geotechnical Slope Assessment
PROJECT#: CA0241
CLIENT: McDowell & Associates Inc.
SOIL DESCRIPTION: Sandy Gravel

SAMPLED: June 22, 2016
TESTED: June 28, 2016
SAMPLE ID: 1G3
DEPTH: 1.5 m

MASS MEASUREMENTS AND PERCENT PASSING

Sieve Size (mm)	Mass Retained on Sieve (g)	Cumulated Mass Retained (g)	Total Mass Finer (g)	Percent Passing
80.0				
63.0				
50.0				
40.0				
25.0	260.0	260.0	1188.8	82.1%
20.0	153.2	413.2	1035.6	71.5%
16.0	104.8	518.0	930.8	64.2%
12.5	123.9	641.9	806.9	55.7%
10.0	91.0	732.9	715.9	49.4%
5.0	239.4	972.3	476.5	32.9%
2.5	135.7	1108.0	340.8	23.5%
1.25	83.1	1191.1	257.7	17.8%
0.630	55.3	1246.4	202.4	14.0%
0.315	74.0	1320.4	128.4	8.9%
0.160	46.8	1367.2	81.6	5.6%
0.080	19.7	1386.9	61.9	4.3%
Pan	1.3	1388.2	60.6	0.0%



RESULTS		
	Gravel	67.1%
	Sand	28.6%
	Silt & Clay	4.3%

GRAIN SIZE		
	D_{10}	0.37 mm
	D_{30}	4.04 mm
	D_{60}	14.15 mm

COEFF.		
	Uniformity, C_U	38.5
	Curvature, C_C	3.1

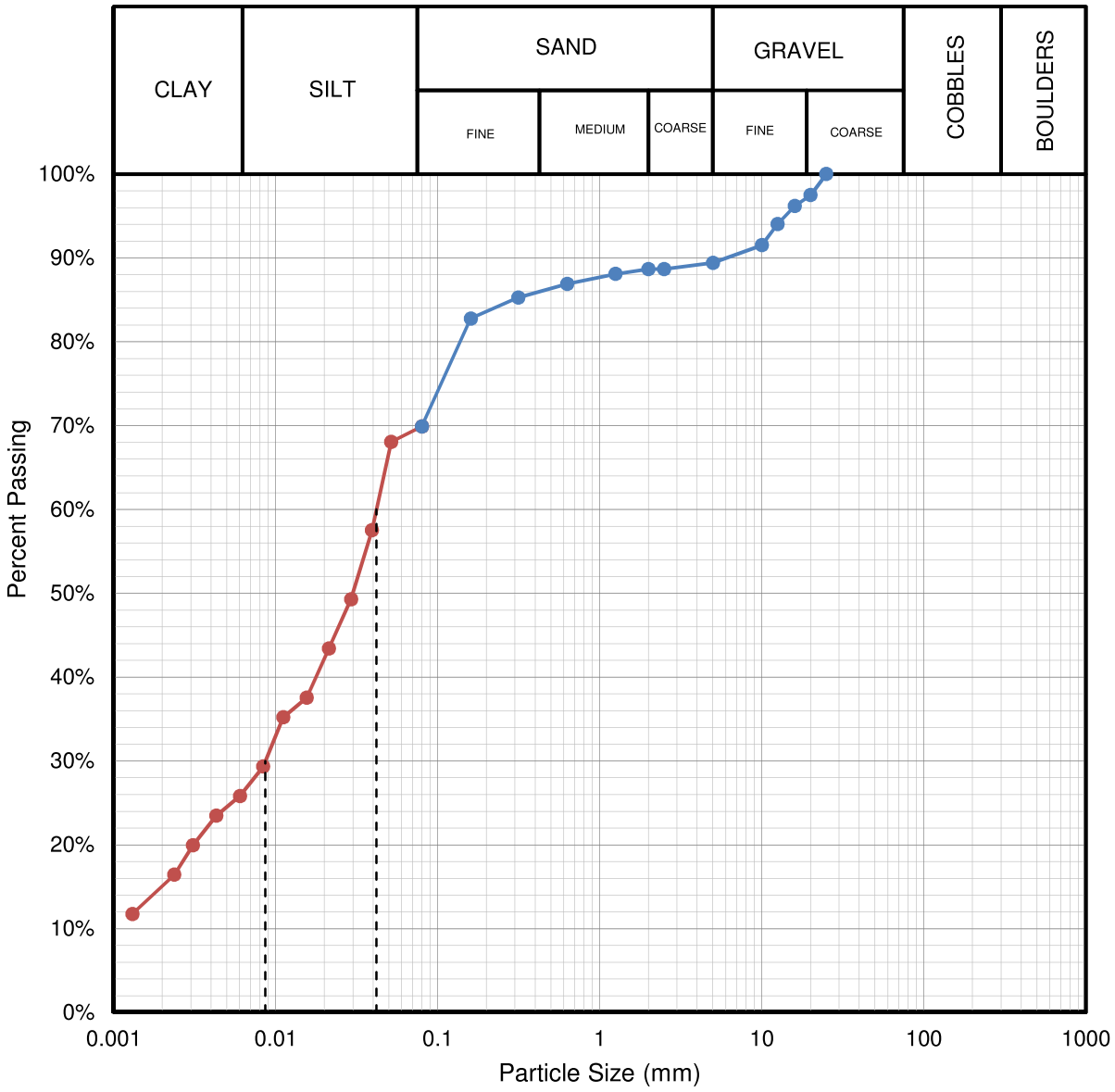
TECH: JB
CHECKED: BR

PARTICLE-SIZE ANALYSIS

ASTM D422

PROJECT: Geotechnical Slope Assessment
PROJECT#: CA0241
CLIENT: McDowell & Associates Inc.
SOIL DESCRIPTION: Sand and Silt

SAMPLE DATE: June 22, 2016
TEST DATE: June 27, 2016
SAMPLE ID: 1G4
DEPTH: 2.3 m



SUMMARY OF RESULTS		
	Gravel	10.6%
	Sand	19.8%
	Silt	43.4%
	Clay	26.2%

GRAIN SIZE		
	D_{10}	---
	D_{30}	0.0086 mm
	D_{60}	0.0419 mm

COEFFICIENTS		
	Coefficient of Uniformity, C_U	---
	Coefficient of Curvature, C_C	---

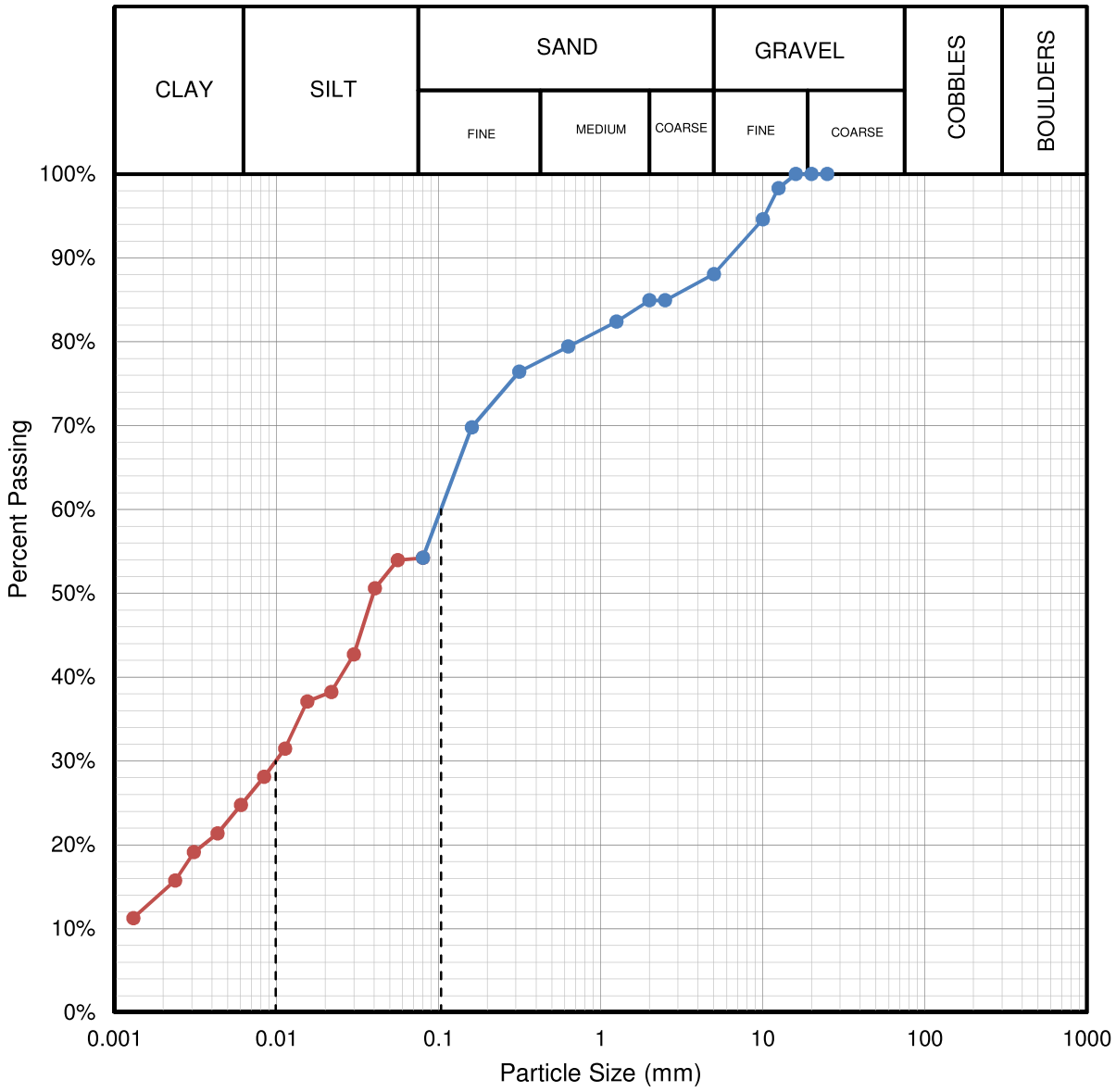
TECH: JB
CHECKED: BR
1 of 1

PARTICLE-SIZE ANALYSIS

ASTM D422

PROJECT: Geotechnical Slope Assessment
PROJECT#: CA0241
CLIENT: McDowell & Associates Inc.
SOIL DESCRIPTION: Silty Sand

SAMPLE DATE: June 22, 2016
TEST DATE: June 27, 2016
SAMPLE ID: 2G3
DEPTH: 2.3 m



SUMMARY OF RESULTS		
	Gravel	11.9%
	Sand	33.9%
	Silt	29.1%
	Clay	25.1%

GRAIN SIZE		
	D_{10}	---
	D_{30}	0.0099 mm
	D_{60}	0.1035 mm

COEFFICIENTS		
	Coefficient of Uniformity, C_U	---
	Coefficient of Curvature, C_C	---

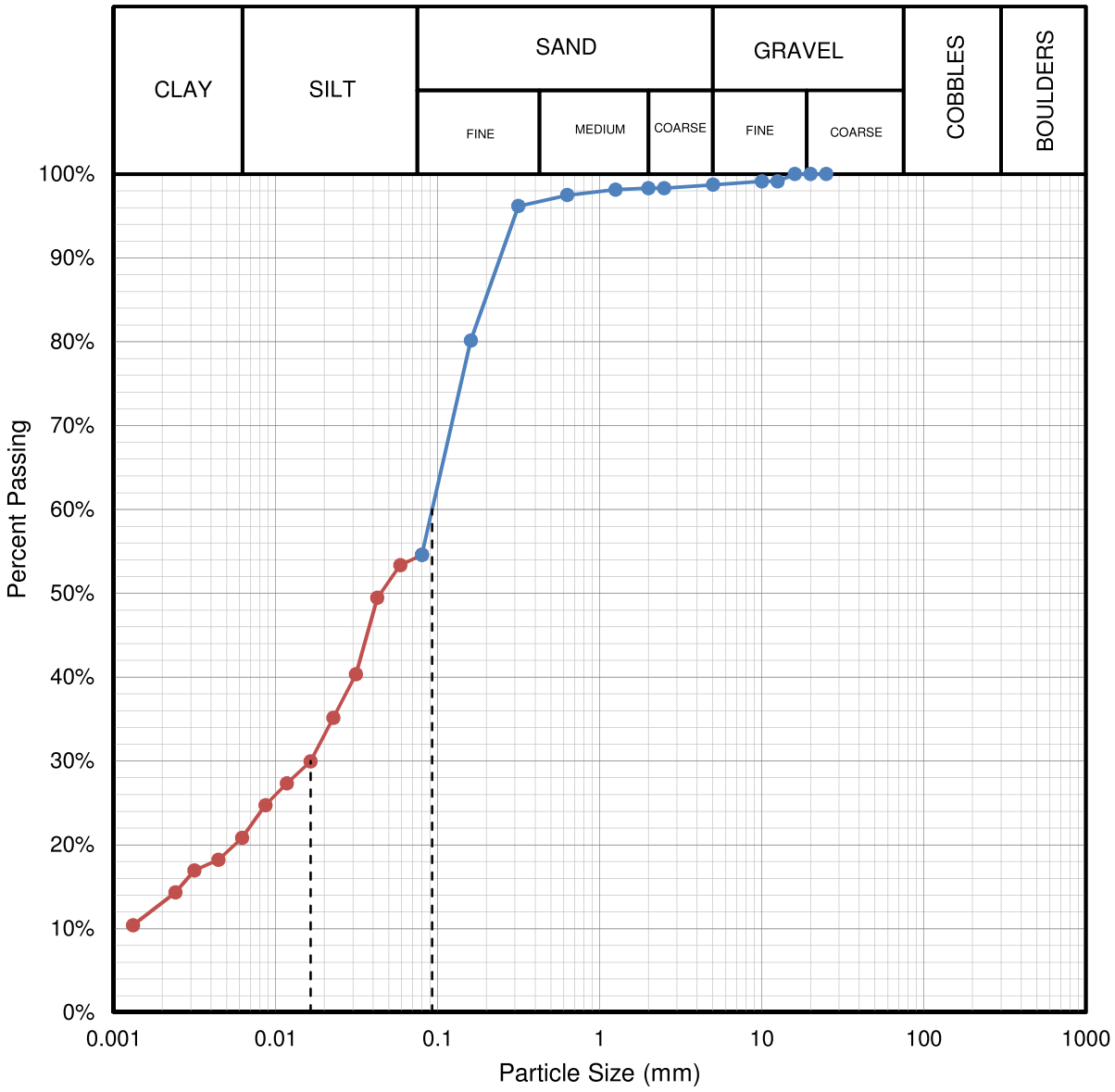
TECH: JB
CHECKED: BR
1 of 1

PARTICLE-SIZE ANALYSIS

ASTM D422

PROJECT: Geotechnical Slope Assessment
PROJECT#: CA0241
CLIENT: McDowell & Associates Inc.
SOIL DESCRIPTION: Silty Sand

SAMPLE DATE: June 22, 2016
TEST DATE: June 27, 2016
SAMPLE ID: 3G1
DEPTH: 1.5 m



SUMMARY OF RESULTS		
	Gravel	1.3%
	Sand	44.4%
	Silt	33.4%
	Clay	20.9%

GRAIN SIZE		
	D_{10}	---
	D_{30}	0.0165 mm
	D_{60}	0.0927 mm

COEFFICIENTS		
	Coefficient of Uniformity, C_U	---
	Coefficient of Curvature, C_C	---

TECH: JB
CHECKED: BR
1 of 1

V14.1 U20160225
U:\CA0200-CA0249\CA0241 - Westbluff Road Slope Stability Assessments - GEO\Lab\Hydrometer 3G1.xlsx

Project: Geotechnical Slope Assessment
Subject: Geotechnical Testing - Soil Sulphate Test Results
Project #: CA0241 **Date:** June 28, 2016

Soil Sulphate Test Results

Laboratory: Parkland Geotechnical

Sample #: 1G4 Borehole: 1 Depth: 2.3 m Result (% Sulphate): 0.04	Sample #: Borehole: Depth: Result (% Sulphate):
Sample #: 2G3 Borehole: 2 Depth: 2.3 m Result (% Sulphate): 0.04	Sample #: Borehole: Depth: Result (% Sulphate):
Sample #: Borehole: Depth: Result (% Sulphate):	Sample #: Borehole: Depth: Result (% Sulphate):
Sample #: Borehole: Depth: Result (% Sulphate):	Sample #: Borehole: Depth: Result (% Sulphate):
Sample #: Borehole: Depth: Result (% Sulphate):	Sample #: Borehole: Depth: Result (% Sulphate):

Comments:

REQUIREMENTS FOR CONCRETE SUBJECTED TO SULPHATE ATTACK (CSA/CAN-A23.1-14)

EXPOSURE CLASSIFICATION	DEGREE OF EXPOSURE	WATER-SOLUBLE SULPHATE(SO4) IN SOIL SAMPLE, %	SULPHATE(SO4) IN GROUND WATER SAMPLES, mg/L	MINIMUM SPECIFIED 56-DAY COMPRESSIVE STRENGTH, MPa	MAXIMUM WATER/CEMENTING MATERIALS RATIO	PORTLAND CEMENT TO BE USED
S-1	Very Severe	over 2.0	over 10,000	35	0.4	HS
S-2	Severe	0.20 to 2.0	1 500 to 10 000	32	0.45	HS
S-3	Moderate	0.10 to 0.20	150 to 1 500	30	0.5	MS or HS

Tech: JB **Chkd:** BR

THE PARKLANDGEO CONSULTING GROUP
EXPLANATION OF TERMS AND SYMBOLS

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

The borehole logs are a graphical representation summarizing the soil profile as determined during site specific field investigation. The materials, boundaries, and conditions have been established only at the borehole location at the time of drilling. The soil conditions shown on the borehole logs are not necessarily representative of the subsurface conditions elsewhere across the site. The transitions in soil profile usually have gradual rather than distinct unit boundaries as shown on the borehole logs.

1. PRINCIPAL SOIL TYPE – The major soil type by weight of material or by behaviour.

Material	Grain Size
Boulders	Larger than 300 mm
Cobbles	75 mm to 300 mm
Coarse Gravel	19 mm to 75 mm
Fine Gravel	5 mm to 19 mm
Coarse Sand	2 mm to 5 mm
Medium Sand	0.425 mm to 2 mm
Fine Sand	0.075 mm to 0.425 mm
Silt & Clay	Smaller than 0.075 mm

2. DESCRIPTION OF MINOR SOIL TYPE – Minor soil types are identified by weight of minor component.

Percent	Descriptor
35 to 50	and
20 to 35	some
10 to 20	little
1 to 10	trace

3. RELATIVE STRENGTH OF COARSE GRAINED SOIL – The following terms are used relative to Standard Penetration Test (SPT), ASTM D1586, N value for blows per 300 mm.

Description	N Value
Very Loose	Less than 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	Over 50

4. CONSISTENCY OF FINE GRAINED SOILS – The following terms are used relative to undrained shear strength and Standard Penetration Test (SPT), ASTM D1586, N value for blows per 300 mm. It is noted that this correlation needs to be used with caution as the correlation is only very approximate.

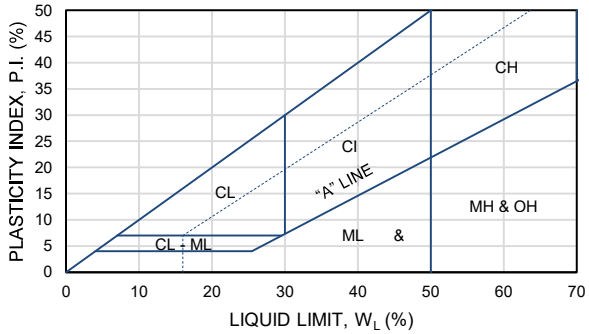
Description	Undrained Shear Strength, C_u (kPa)	N Value
Very Soft	Less than 12	Less than 2
Soft	12 to 25	2 to 4
Firm	25 to 50	4 to 8
Stiff	50 to 100	8 to 15
Very Stiff	100 to 150	15 to 30
Hard	Over 150	Over 30

Parkland GEO

THE PARKLANDGEO CONSULTING GROUP
EXPLANATION OF TERMS AND SYMBOLS

MODIFIED UNIFIED CLASSIFCATION SYSTEM FOR SOILS

MAJOR DIVISION			GROUP SYMBOL	GRAPH SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE GRAINED SOILS (MORE THAN HALF BY WEIGHT LARGER THAN NO. 200 SIEVE)	GRAVELS MORE THAN HALF COARSE GRAINS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)	GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}}$ > 4 AND Cc = $\frac{(D_{30})^2}{D_{10} \times D_{60}}$ = 1 to 3	
			GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS	
		DIRTY GRAVELS (WITH SOME FINES)	GM		SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4
			GC		CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE AND P.I. GREATER THAN 7
	SANDS MORE THAN HALF FINE GRAINS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)	SW		WELL GRADED SANDS, GRAVELLY SANDS WITH LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}}$ > 6 AND Cc = $\frac{(D_{30})^2}{D_{10} \times D_{60}}$ = 1 to 3	
			SP		POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS	
		DIRTY SANDS (WITH SOME FINES)	SM		SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4
			SC		CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE AND P.I. GREATER THAN 7
FINE-GRAINED SOILS (MORE THAN HALF BY WEIGHT PASSES NO. 200 SIEVE)	SILTS BELOW "A" LINE NEGLIGIBLE ORGANIC CONTENT	W_L < 50%	ML		INORGANIC SILTS & VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	CLASSIFICATION IS BASED UPON PLASTICITY CHART (SEE BELOW)	
		W_L > 50%	MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS		
	CLAYS ABOVE "A" LINE NEGLIGIBLE ORGANIC CONTENT	W_L < 30%	CL		INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY SOILS		
		30% < W_L < 50%	CI		INORGANIC CLAYS OF MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS		
		W_L > 50%	CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS		
	ORGANIC SILTS & CLAYS BELOW "A" LINE	W_L < 50%	OL		ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW AND MEDIUM PLASTICITY		
		W_L > 50%	OH		ORGANIC CLAYS OF HIGH PLASTICITY, ORGANIC SILTS		
HIGHLY ORGANIC SOILS			Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOR OR ODOR, AND OFTEN FIBROUS TEXTURE	



NOTES ON SOIL CLASSIFICATION AND DESCRIPTION:

1. Soil are classified and described according to their engineering properties and behaviour.
2. Boundary classification for soil with characteristics of two groups are given combined group symbols (e.g. GW-GC is a well graded gravel sand mixture with clay binder between 5 and 12%).
3. Soil classification is in accordance with the Unified Soil Classification System (ASTM D2487) with the exception that an inorganic clay of medium plasticity (CI) is recognized.
4. The use of modifying adjectives may be employed to define the estimated percentage range by eight of minor components.

Parkland GEO

THE PARKLANDGEO CONSULTING GROUP
GENERAL TERMS, CONDITIONS AND LIMITATIONS

The use of this attached report is subject to the following general terms and conditions.

1. STANDARD OF CARE - In the performance of professional services, ParklandGEO used the degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same or similar localities. No other warranty expressed or implied is made in any manner.

2. INTERPRETATION OF THE REPORT - The CLIENT recognizes that subsurface conditions will vary from those encountered at the location where borings, surveys, or explorations are made and that the data, interpretations and recommendation of ParklandGEO are based solely on the information available to him. Classification and identification of soils, rocks, geological units, contaminated materials and contaminant quantities will be based on commonly accepted practices in geotechnical or environmental consulting practice in this area. ParklandGEO will not be responsible for the interpretation by others of the information developed.

3. SITE INFORMATION - The CLIENT has agreed to provide all information with respect to the past, present and proposed conditions and use of the Site, whether specifically requested or not. The CLIENT acknowledged that in order for ParklandGEO to properly advise and assist the CLIENT, ParklandGEO has relied on full disclosure by the CLIENT of all matters pertinent to the Site investigation.

4. COMPLETE REPORT - The Report is of a summary nature and is not intended to stand alone without reference to the instructions given to ParklandGEO by the CLIENT, communications between ParklandGEO and the CLIENT, and to any other reports, writings or documents prepared by ParklandGEO for the CLIENT relative to the specific Site, all of which constitute the Report. The word "Report" shall refer to any and all of the documents referred to herein. In order to properly understand the suggestions, recommendations and opinions expressed by ParklandGEO, reference must be made to the whole of the Report. ParklandGEO cannot be responsible for use of any part or portions of the report without reference to the whole report. The CLIENT has agreed that "This report has been prepared for the exclusive use of the named CLIENT. 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. ParklandGEO accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report."

   The CLIENT has agreed that in the event that any such report is released to a third party, the above disclaimer shall not be obliterated or altered in any manner. The CLIENT further agrees that all such reports shall be used solely for the purposes of the CLIENT and shall not be released or used by others without the prior written permission of ParklandGEO.

5. LIMITATIONS ON SCOPE OF INVESTIGATION AND WARRANTY DISCLAIMER
   There is no warranty, expressed or implied, by ParklandGEO that:
   a) the investigation uncovered all potential geo-hazards, contaminants or environmental liabilities on the Site; or
   b) the Site is entirely free of all geo-hazards or contaminants as a result of any investigation or cleanup work undertaken on the Site, since it is not possible, even with exhaustive sampling, testing and analysis, to document all potential geo-hazards or contaminants on the Site.

   The CLIENT acknowledged that:
   a) the investigation findings are based solely on the information generated as a result of the specific scope of the investigation authorized by the CLIENT;
   b) unless specifically stated in the agreed Scope of Work, the investigation will not, nor is it intended to assess or detect potential contaminants or environmental liabilities on the Site;
   c) any assessment regarding geological conditions on the Site is based on the interpretation of conditions determined at specific sampling locations and depths and that conditions may vary between sampling locations, hence there can be no assurance that undetected geological conditions, including soils or groundwater are not located on the Site;
   d) any assessment is also dependent on and limited by the accuracy of the analytical data generated by the sample analyses;
   e) any assessment is also limited by the scientific possibility of determining the presence of unsuitable geological conditions for which scientific analyses have been conducted; and
   f) the laboratory testing program and analytical parameters selected are limited to those outlined in the CLIENT's authorized scope of investigation; and
   g) there are risks associated with the discovery of hazardous materials in and upon the lands and premises which may inadvertently discovered as part of the investigation. The CLIENT acknowledges that it may have a responsibility in law to inform the owner of any affected property of the existence or suspected existence of hazardous materials and in some cases the discovery of hazardous conditions and materials will require that certain regulatory bodies be informed. The CLIENT further acknowledges that any such discovery may result in the fair market value of the lands and premises and of any other lands and premises adjacent thereto to be adversely affected in a material respect.

6. COST ESTIMATES - Estimates of remediation or construction costs can only be based on the specific information generated and the technical limitations of the investigation authorized by the CLIENT. Accordingly, estimated costs for construction or remediation are based on the known site conditions, which can vary as new information is discovered during construction. As some construction activities are an iterative exercise, ParklandGEO shall therefore not be liable for the accuracy of any estimates of remediation or construction costs provided.

7. LIMITATION OF LIABILITY - The CLIENT has agreed that to the fullest extent permitted by the law ParklandGEO's total liability to CLIENT for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in anyway relating to the Project is contractually limited, as outlined in ParklandGEO's standard Consulting Services Agreement. Further, the CLIENT has agreed that to the fullest extent permitted by law ParklandGEO is not liable to the CLIENT for any special, indirect or consequential damages whatsoever, regardless of cause.

8. INDEMNIFICATION - To the fullest extent permitted by law, the CLIENT has agreed to defend, indemnify and hold ParklandGEO, its directors, officers, employees, agents and subcontractors, harmless from and against any and all claims, defence costs, including legal fees on a full indemnity basis, damages, and other liabilities arising out of or in any way related to ParklandGEO's work, reports or recommendations.

Subdivision & Development Appeal Board

B-1; March 28, 2024

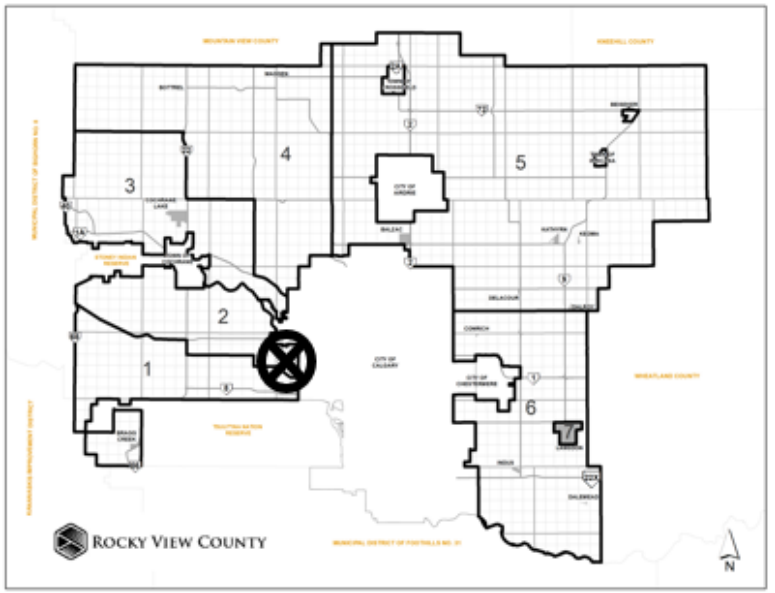
File: PRDP20240118

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement

Applicant: Dean Thomas Design Group (Ryland Cook)
Owner: Lang-Hodge, John & Claudine
Appellants: Bird, Richard & Cathryn

Land Use and Location

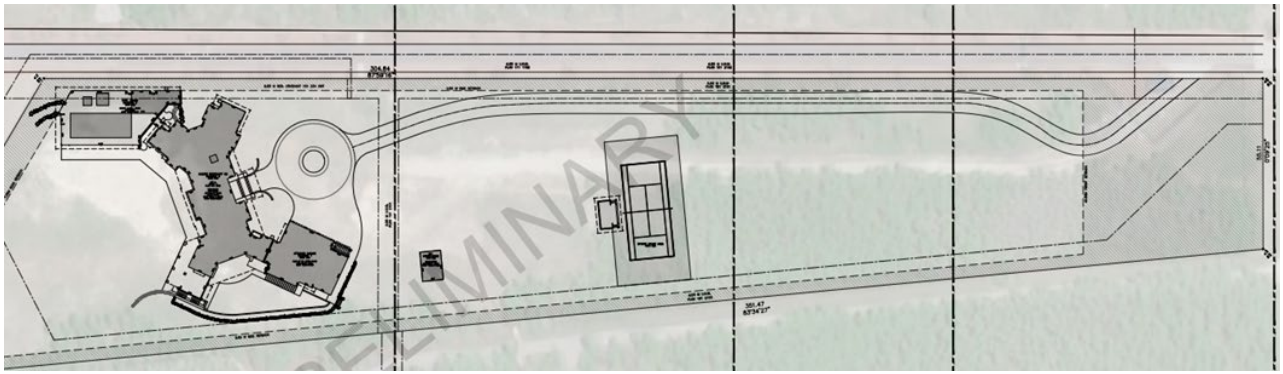
- Located approximately 1 mile south of Springbank Road and on the west side of Westbluff Road
- 4.69 acres in area, zoned as Residential, Rural District (R-RUR)
- Located within Central Springbank Area Structure Plan
- Surrounded primarily by residential parcels of varying sizes



LAND USE MAP

NE-18-24-02-05;
Division: 2; Roll: 04618044

ROCKY VIEW COUNTY



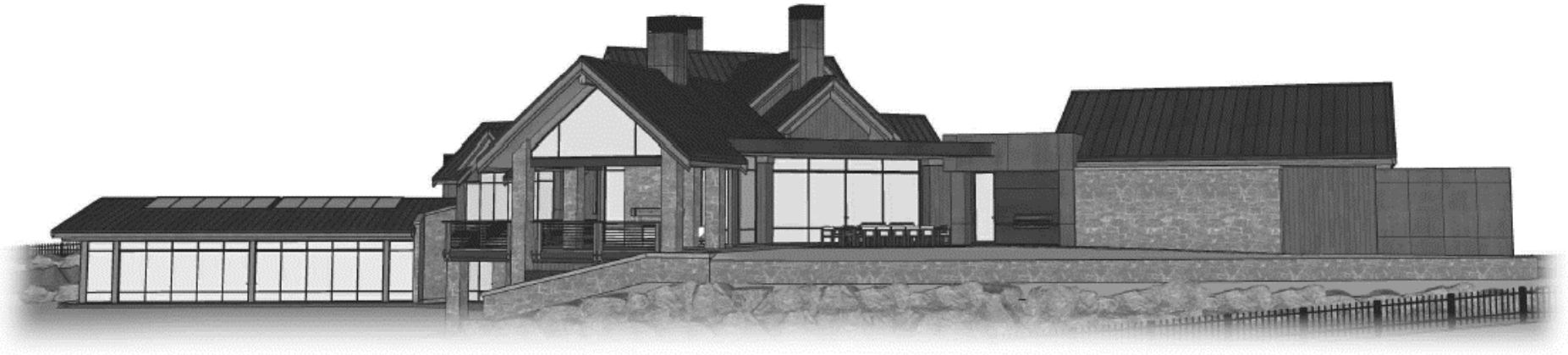
Application Details

- Single-lot regrading, excavation, and placement of clean fill to accommodate the construction of a new Dwelling, Single Detached and site improvements
- Dwelling requires relaxation to the minimum top-bank setback requirement
- Location of dwelling was chosen to effectively manage stormwater drainage given the size of the home
- Meets all maximum building height and minimum setback requirements of the R-RUR district
- Subsequent technical reports have been included as prior to release conditions, to ensure the development is technically sound

EAST & WEST ELEVATIONS

NE-18-24-02-05;
Division: 2; Roll: 04618044

ROCKY VIEW COUNTY



NORTH & SOUTH ELEVATIONS

NE-18-24-02-05;
Division: 2; Roll: 04618044

ROCKY VIEW COUNTY

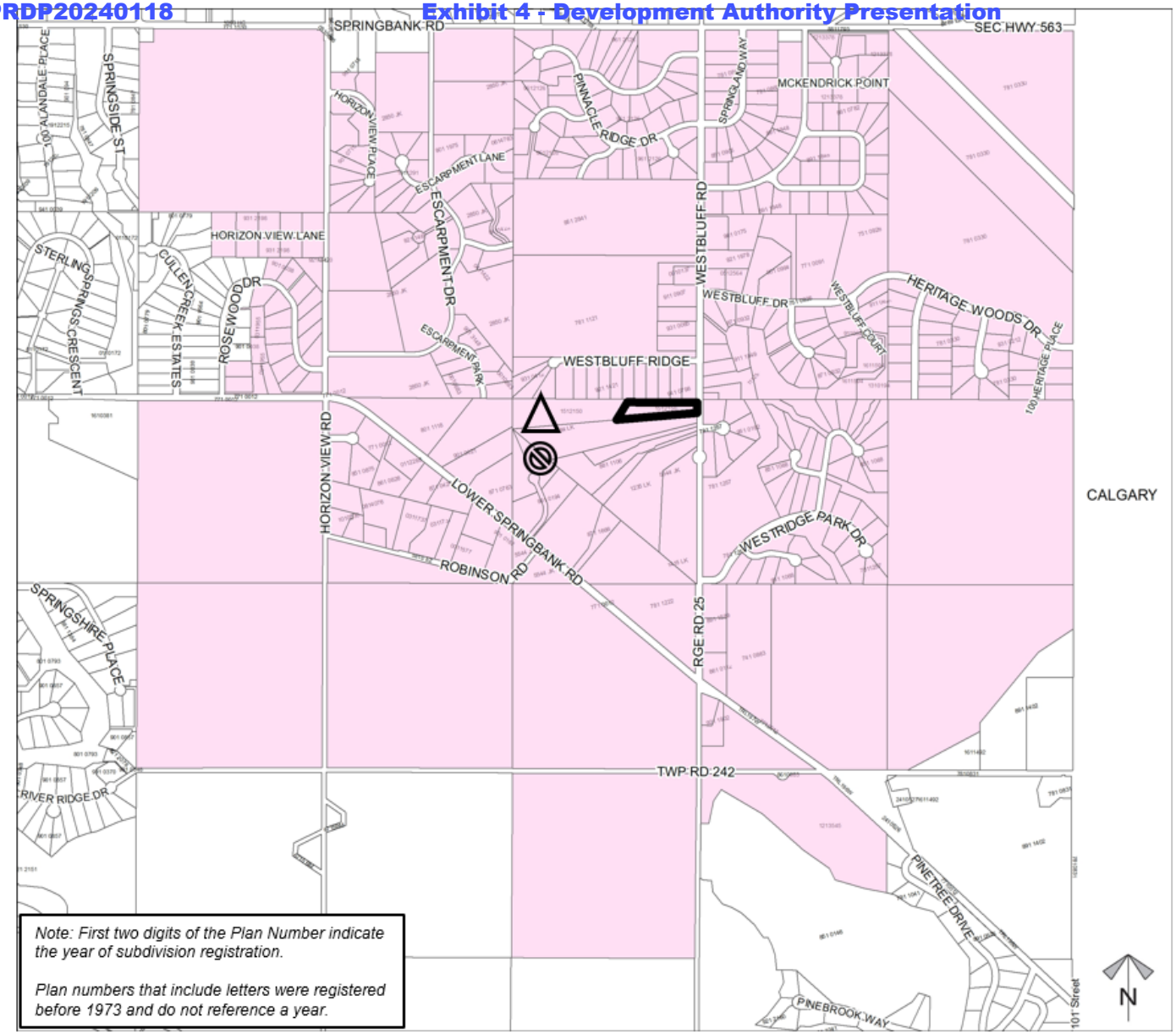

2024 03 15 14 25


2024 03 15 14 23


2024 03 15 14 29


2024 03 15 14 24

SITE PHOTOS CONT'D NE-18-24-02-05; Division: 2; Roll: 04618044



Note: First two digits of the Plan Number indicate the year of subdivision registration.

Plan numbers that include letters were registered before 1973 and do not reference a year.

ROCKY VIEW COUNTY

Landowner Circulation Area

Development Proposal

Single-lot regrading, excavation, and placement of clean fill, for the construction of a dwelling, single detached and site improvements, and relaxation to the minimum top-of-bank setback requirement.

Legend

Support ☆

Not Support ⊘

Concern △

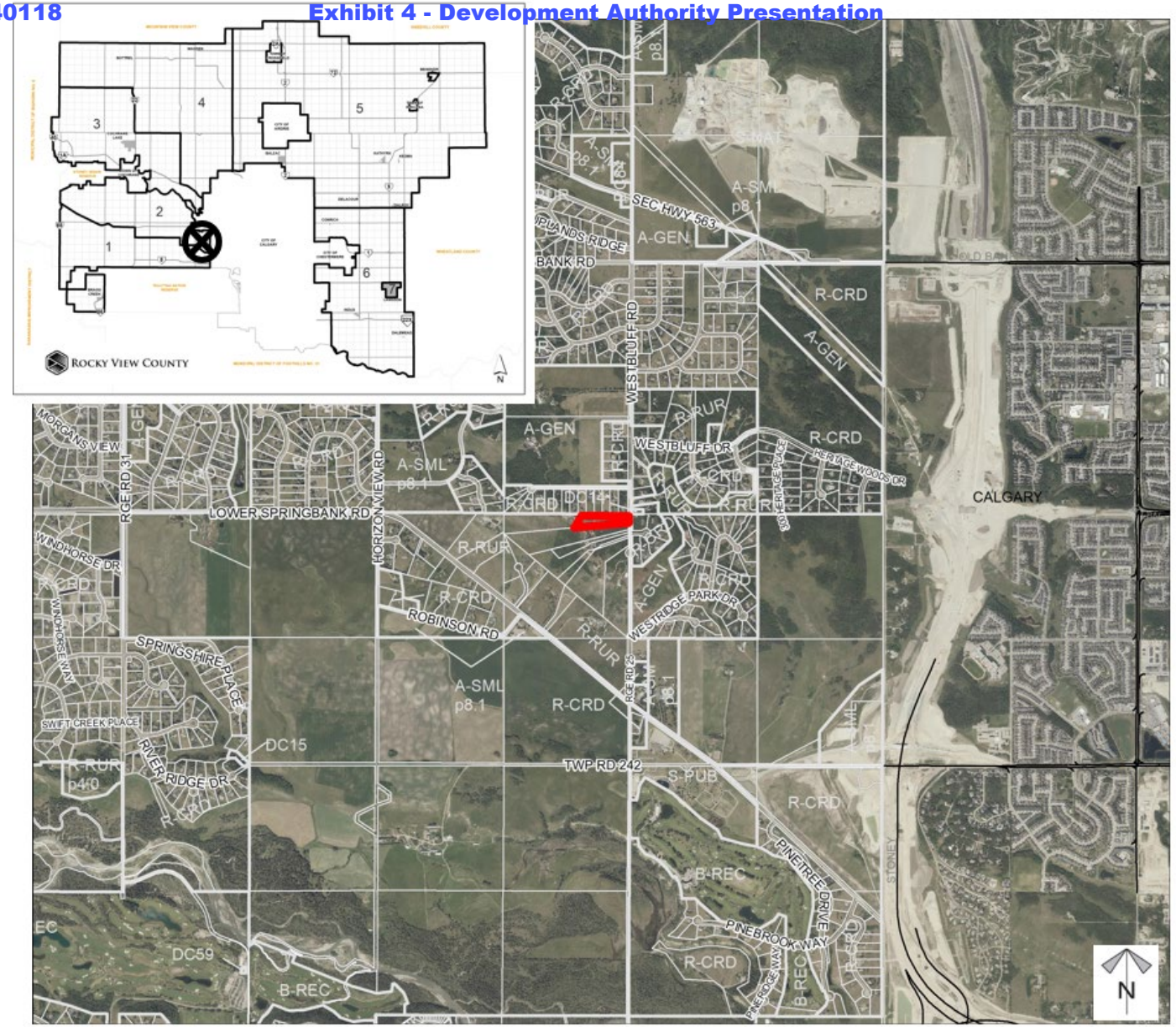
Division: 2
Roll: 04618044
File: PRDP20240118
Printed: Mar 14, 2024
Legal: A portion of NE-18-24-2-W5M

Reasons for Appeal

1. Proposed development will negatively impact the natural elevation/contours of the land, detracting from the rural setting of the surrounding area.
2. Proposed building height of the dwelling is incompatible with adjacent parcels.
3. Proposed development will negatively impact existing stormwater drainage patterns.
4. Proposed development will negatively impact the existing skyline/viewshed of the appellant's home, resulting in decreased land value.
5. Requested relaxation to minimum top-of-bank setback requirement will result in the dwelling visually looming over dwellings at the bottom of the slope, including the appellant's dwelling.

Development Authority Position

1. Proposed changes to existing grades/elevations are necessary to the construction of the dwelling, due to the footprint and location of the dwelling.
2. Proposed building height does not require a relaxation, and is compliant with the maximum building height requirement of the Residential, Rural District.
3. Proposed location of the home is to effectively manage stormwater drainage given the size of the home. A Site-Specific Stormwater Implementation Plan (SSIP) is included as a prior-to-release condition of approval.
4. Proposed dwelling is relatively parallel with other existing homes in the area at the top of the slope. Parcel is well screened via existing trees.
5. Minimum top-of-bank setback requirement is implemented to ensure safe placement of dwellings and can be relaxed at the discretion of the Development Authority. The purpose of such regulation is not in respect to form and massing of buildings. Dwelling location will not impact the existing form and massing of the community.



CONCLUSION

NE-18-24-02-05;
Division: 2; Roll: 04618044

ROCKY VIEW COUNTY

From: [redacted]
To: PAA SDAB
Subject: Appeal Hearing File: 04618044, March 28, 2024 Re : Development Permit #PRDP20240118, Lot 4, Block 2, Plan 1512150, NE-18-24-02-05 (242253 Westbluff Road)
Date: Monday, March 25, 2024 1:16:29 PM

Att: Subdivision and Development Appeal Board for Rockyview County

To whom it may concern:

The south end of our property (Lot 3, Plan 9211421, SE-19-24-02-05; 15 Westbluff Ridge) is directly bordered by the access road to our neighbors' house 242259 Westbluff Road and the top-of-bank portion of property 242253 Westbluff Road (hereinafter referred to as The Development).

Historically stormwater drainage has not been an issue on our property.

The grade of the top-of-bank portion of The Development has been raised at least a couple of times over the years by previous owners.

Another raising of the grade of the top-of-bank portion of The Development is of considerable concern to us, especially since a north-south culvert had to be installed under the elevated access road south of our property in 2018 (following an inspection by Rockyview Community Peace Officer L II-Bylaw/Enforcement Services, Steve Usher) to ensure proper drainage of stormwater.

Please confirm that yet another substantial raising of the grade as proposed for The Development will not cause an adverse material impact on our property with regards to stormwater drainage and/or septic field drainage.

In addition we would like to thank Rockyview County for confirming that The Development will not obstruct existing view channels, will take into account the natural topography and will be consistent with the Residential Development Policies of the ASP (please see: 1 - PRDP20240118 Exhibit 3 - Development Authority Report, Page 4 of 117, 2.9 Residential Development; submitted by: Dominic Kazmierczak, Manager Planning; concurred by: Matthew Boscariol, Executive Director Community Development Services), ensuring that our property will not suffer negative material impacts, e.g. reduced monetary property value.

Sincerely,

Monika & Hagen Schultes
15 Westbluff Ridge

Calgary, AB
T3Z 3P2
Email:
[redacted]

DEANTHOMAS
DESIGN GROUP

1109 Olympic Way SE
Calgary, Alberta T2G 1B9
deanthomas.ca

26 March 2024

Subdivision and Development Appeal Board for Rockyview County
262075 Rocky View Point
Rockyview County, Alberta T4A 0X2

Re: PRDP20240118
File: 04618044
242253 Westbluff Road, Rockyview County

To the Subdivision and Development Appeal Board [SDAB],

Thank you for taking the time to preside over our appeal hearing on March 28th, 2024. As the Applicant of the property at 242253 Westbluff Road under appeal, we wish to submit materials to the board prior to the hearing for their consideration, as well as presentation during the hearing. Below is an itemized list of materials which corresponds to the package attached herein. Please review these materials and reach out with any additional question you may have surrounding these items.

List of Submission Materials for Appeal Hearing 04618044 [PRDP20240118, 242253 Westbluff Road]

Massing and placement

1. Large format overview of surrounding developments
2. Setback measurement of proposed development to appellant's
3. Setback measurement of existing developments to appellant's
4. 3D Representation of development from appellant's property
5. Google Earth Street View of similar view for comparison
6. 12.0m Height Restriction Illustration

Site Development

7. Approved geotechnical setback of 1270.00.
8. Comparison with 1270.00 with proposed development
9. Registered document and instrument outline including overland drainage ROW's
10. Stormwater management plan – *pending final review and approval from RVC*
11. Deep fills report – *pending final review and approval from RVC*

Thank you for taking the time to review these documents. We look forward to discussing further during the hearing.

Ryland Cook
Director of Production
Dean Thomas Design Group


© 2024 Microsoft Corporation © 2024 Maxar ©CNES (2024) Distribution Airbus DS


44512 [1460-4 1/4"]
44265 [1452'-3 1/4"]
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SCALE 1:1000

SCALE 1:1000

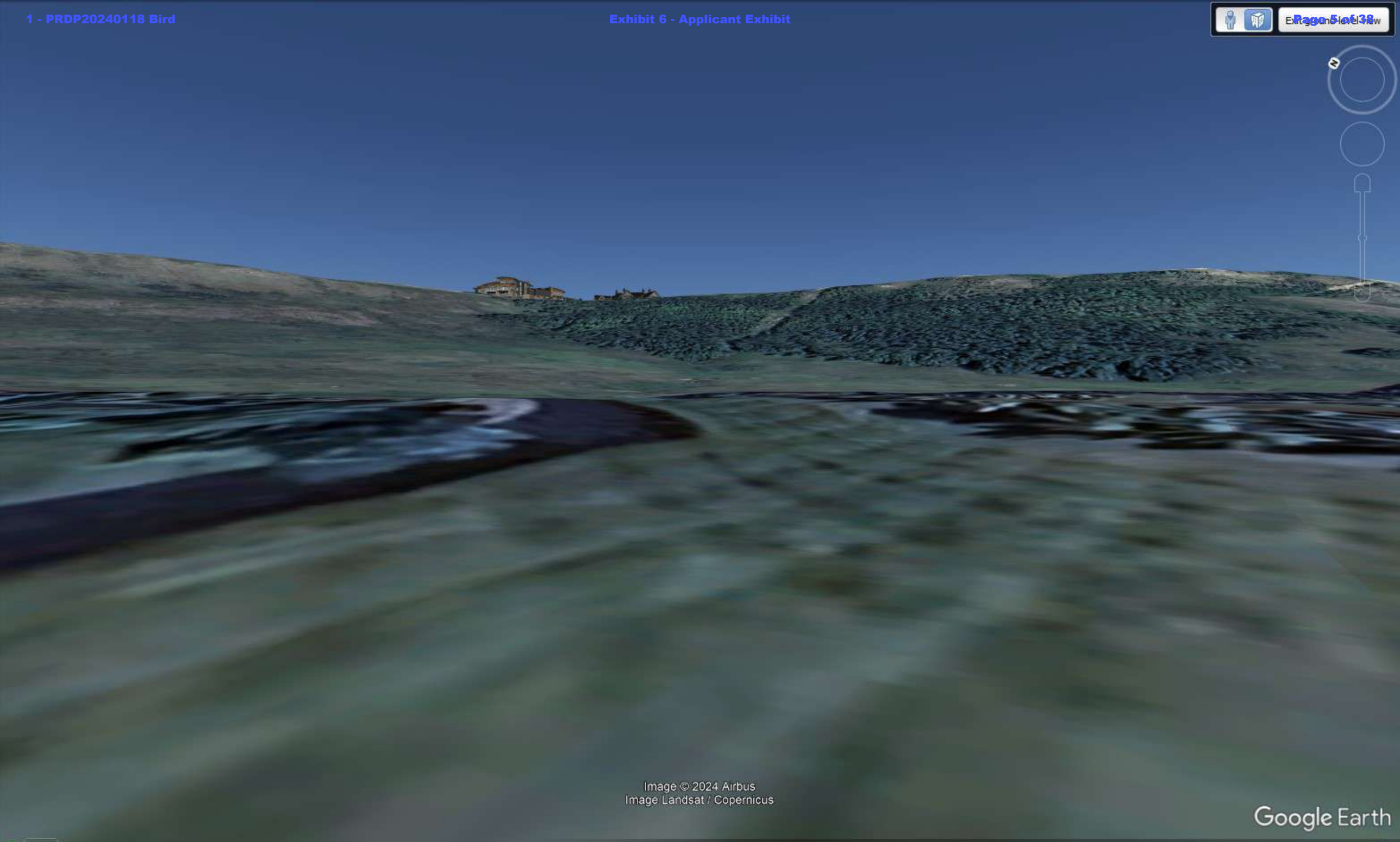
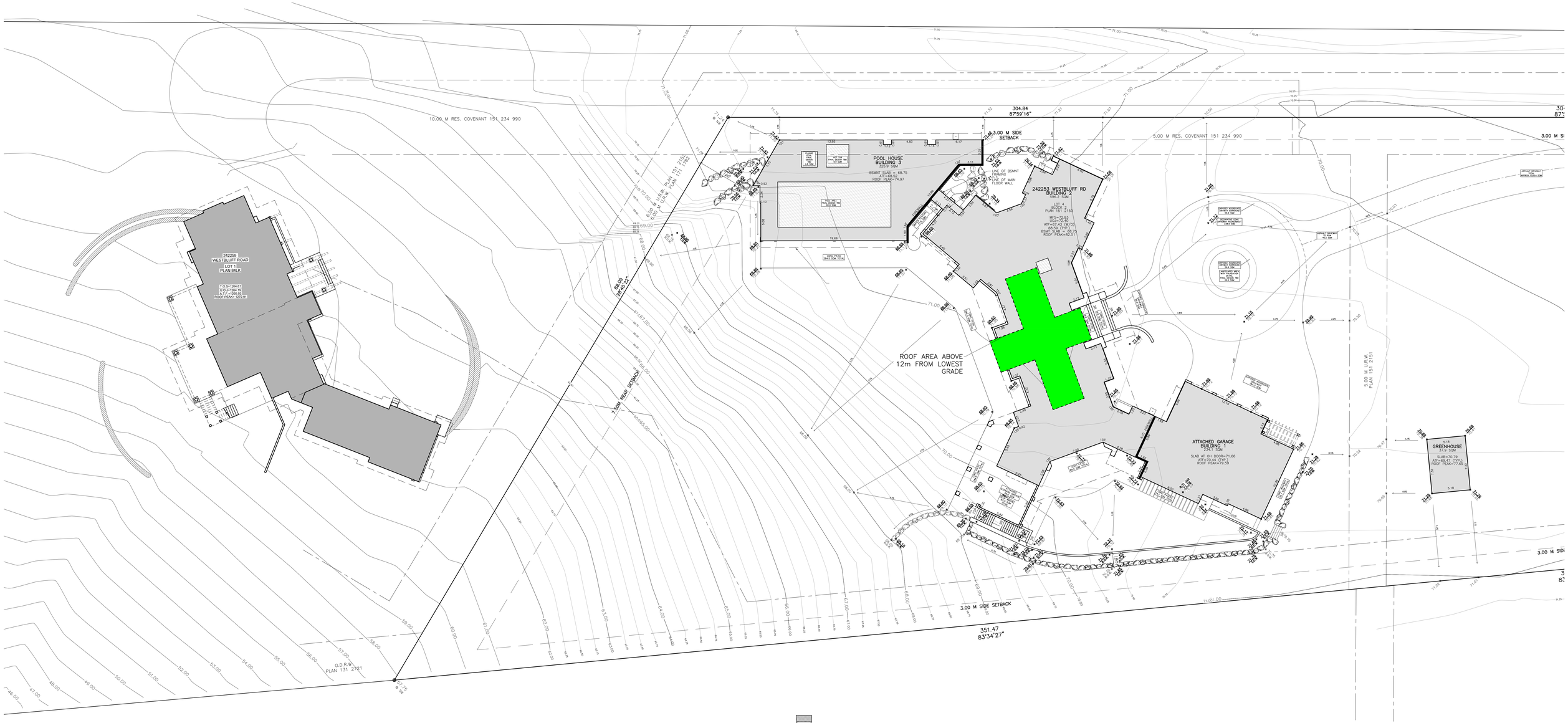
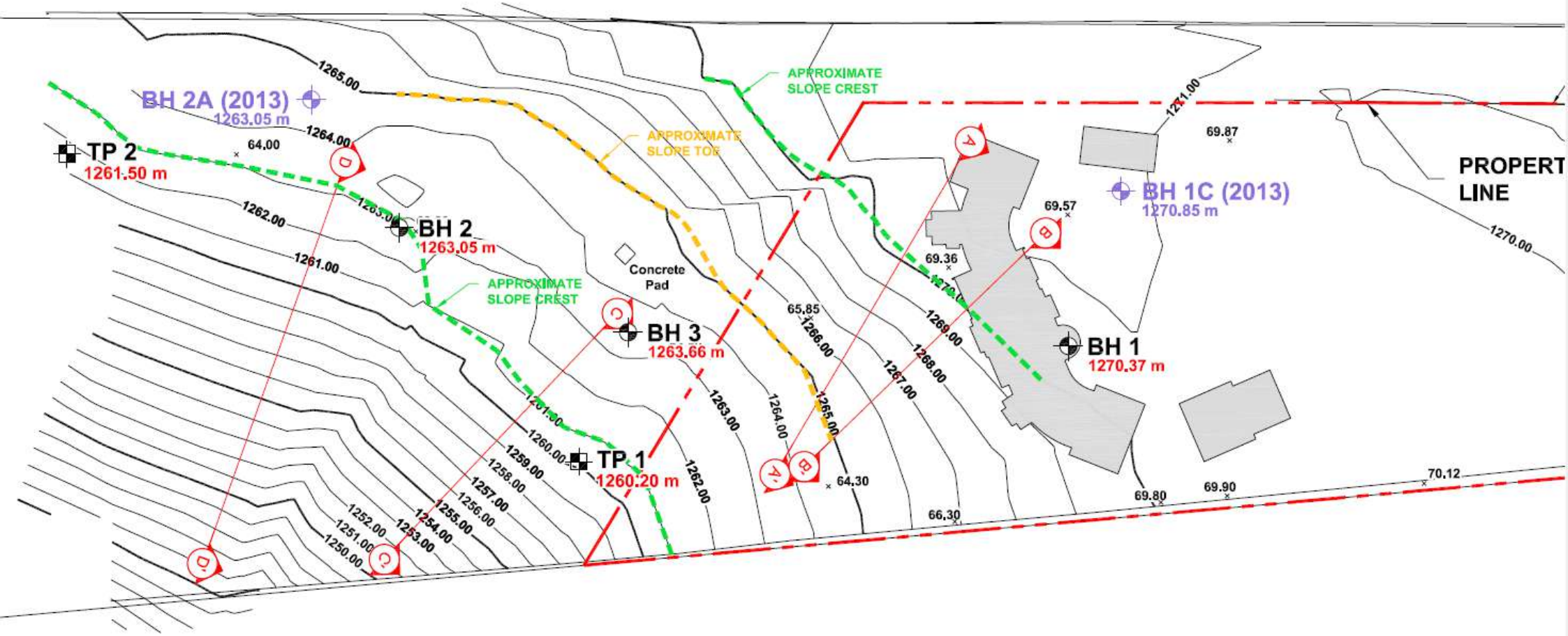


Image © 2024 Airbus
Image Landsat / Copernicus
Google Earth
1985
Imagery Date: 7/15/2023
eye alt 1.19 km


15 Clear Mountain Rise
Calgary, Alberta
Report a problem
Google


10.00 M RES. COVENANT 151 234 990
5.00 M RES. COVENANT 151 234 990
3.00 M SIDE SETBACK
304.84
87°59'16"
242259
WESTBLUFF ROAD
LOT 1
PLAN 84LK
T.O.S=1264.61
U.O.F=1264.19
LOW.F=1260.93
ROOF PEAK=1272.91
POOL HOUSE
BUILDING 3
229.9 SQM
BSMNT SLAB = 68.75
MF'S=72.83
ROOF PEAK=74.97
242253 WESTBLUFF RD
BUILDING 2
399.7 SQM
LOT A
PLAN 151 2154
MF'S=72.83
U/CR=72.42
ATT=67.43 (W/O)
ATT=69.47 (TYP.)
BSMT SLAB = 68.75
ROOF PEAK=82.51
LINE OF BSMNT FRAMING
LINE OF MAIN FLOOR WALL
ROOF AREA ABOVE 12m FROM LOWEST GRADE
ATTACHED GARAGE
BUILDING 1
234.1 SQM
SLAB AT GH. DOOR=71.66
ATT=69.47 (TYP.)
ROOF PEAK=79.09
GREENHOUSE
57.9 SQM
SLAB=70.75
ATT=69.47 (TYP.)
ROOF PEAK=77.69
7.50M REAR SETBACK
3.00 M SIDE SETBACK
351.47
83°34'27"
5.00 M U.R.W. PLAN 151 2151
O.D.R.W. PLAN 131 2721


12.00


BH 2A (2013)
1263.05 m
TP 2
1261.50 m
BH 2
1263.05 m
BH 3
1263.66 m
TP 1
1260.20 m
BH 1
1270.37 m
BH 1C (2013)
1270.85 m
APPROXIMATE SLOPE CREST
APPROXIMATE SLOPE TOE
APPROXIMATE SLOPE CREST
Concrete Pad
PROPERT LINE
A
A'
B
B'
C
C'
D
D'
1265.00
1264.00
1263.00
1262.00
1261.00
1260.00
1259.00
1258.00
1257.00
1256.00
1255.00
1254.00
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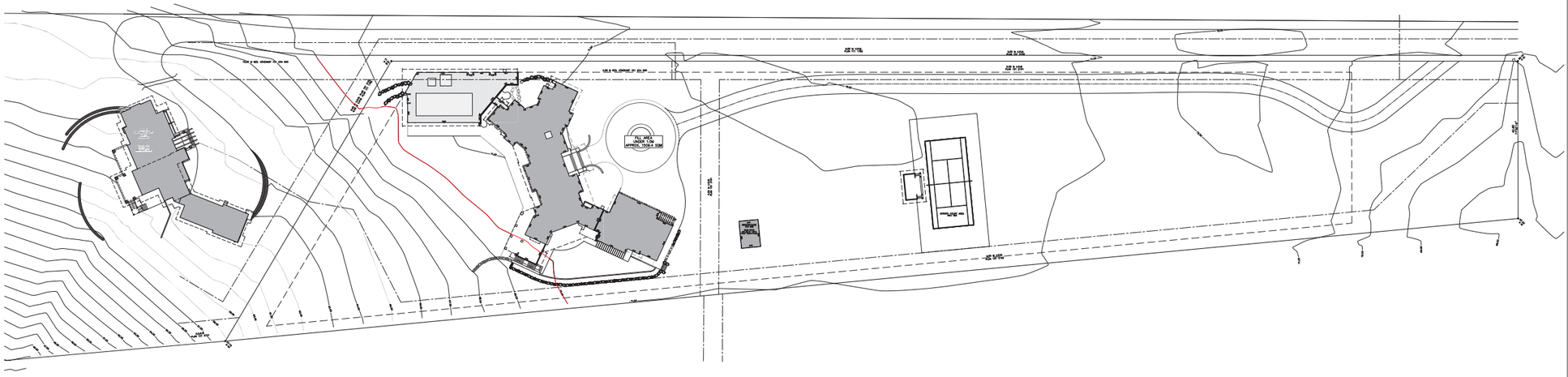
70.12



DEANTHOMAS
DESIGN GROUP

403 | 719 | 6641

1109 OLYMPIC WAY SE
CALGARY, ALBERTA
T2G 1B9

McKINLEY MASTERS

403 | 239 | 0602

544 47TH AVENUE NW
CALGARY, ALBERTA
T3B 1Z9

PROJECT:

ISSUED FOR APPEAL

242253 WESTBLUFF RD
ROCKYVIEW COUNTY, AB

LOT 4
BLOCK 2
PLAN 1512150

REVISION SCHEDULE:

1.	ISSUED FOR APPEAL	MAR 26, 2024

DRAWING TITLE:

KEY PLAN

SCALE: 1:400
DATE: MAR 26, 2024

SHEET: A1.1

ALBERTA LAND SURVEYOR'S

REAL PROPERTY REPORT

LOT: 4 BLOCK: 2 PLAN: 151 2150

MUNICIPAL ADDRESS: 242253 West Bluff Road, Rocky View County ("the Property")

CLIENT: Unruh

SCALE: 1:1000

Date of Survey: January 12, 2022 Date of Title Search: December 9, 2021

NOTES:

1. Found Iron Post shown thus: ●
2. Established temporary point and left no mark shown thus: ×
3. Property boundaries shown thus: ———
4. Easements and Right of Ways shown thus: — —
5. Distances are in metres.
6. Calculated boundaries are derived from Plan 151 2150 and have been shown thus: (calc.)
7. Fences shown are within 0.20 of the Property line unless noted and shown thus: —×—
8. Abbreviations that may be used in this report include:

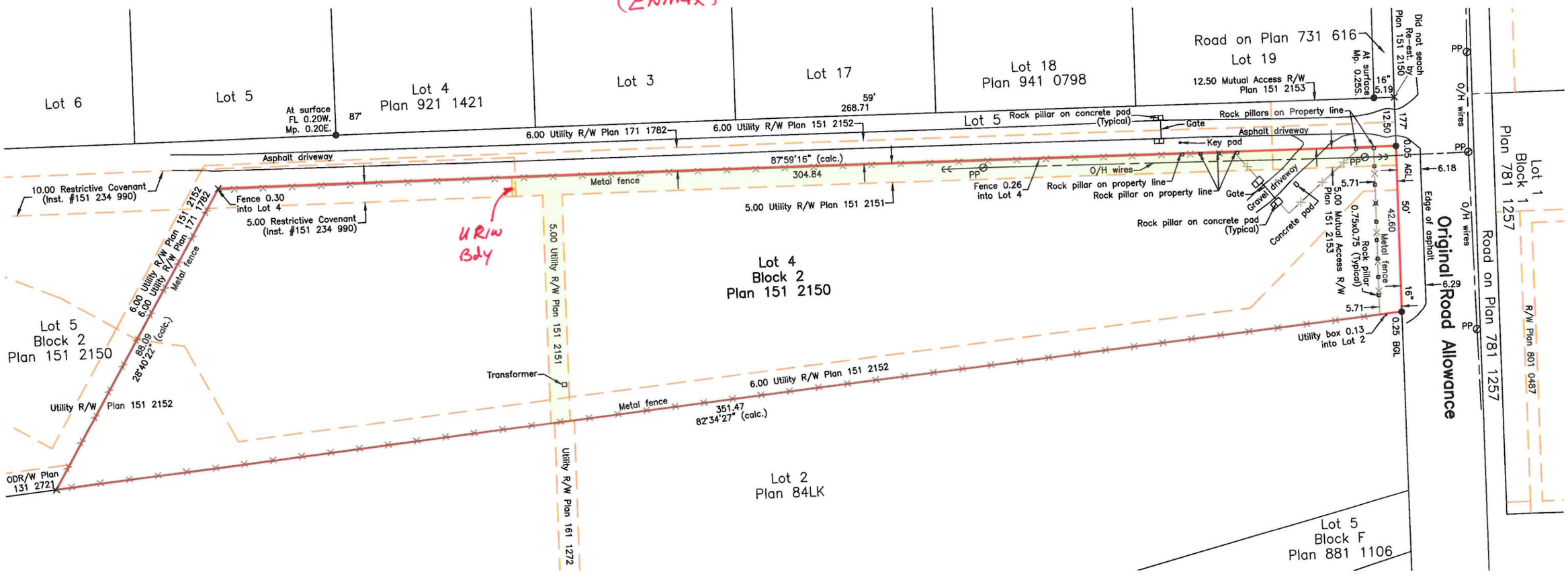
Inst.	Instrument	R/W.	Right of Way
OD	Overland Drainage	Re-est.	Re-established
O/H.	Overhead	Mp.	Marker post
PP	Power pole	AGL	Above ground level
⇐	Power pole anchor	BGL	Below ground level
		FL	Fence line

ALBERTA LAND SURVEYOR'S CERTIFICATION:

I hereby certify that this report, which includes this plan and related survey, was prepared and performed under my personal supervision and in accordance with the Alberta Land Surveyors' Association's Manual of Standard Practice and supplements thereto. Accordingly, within those standards and as of the date of this report, I am of the opinion that:

1. the plan illustrates the boundaries of the Property, the improvements as defined in Part D, Section 8.5 of the Alberta Land Surveyors' Association's Manual of Standard Practice, and registered easements and rights-of-way affecting the extent of the title to the Property;
2. the improvements are entirely within the boundaries of the Property;
3. no visible encroachments exist on the Property from any improvements situated on an adjoining property;
4. no visible encroachments exist on registered easements or rights-of-way affecting the extent of the Property, except rock pillars, fence, gravel driveway, power poles, power pole anchors, overhead wires, and transformer as shown; and
5. in addition to registered easements or rights-of-way shown on this plan, the Property is also affected by the following surface interests:
   #761 072 548 – Utility Right of Way (Grantee – Canadian Western Natural Gas Company Limited)
   #151 190 262 – Caveat Re: Development Agreement Pursuant to Municipal Government Act

INSTRUMENT 151 190 259 - PLAN 151 2151 (ENMAX)



PURPOSE OF REPORT:

This Report and related plan have been prepared for the benefit of the Property owner, subsequent owners and any of their agents for the purpose of a land conveyance. Copying is permitted only for the benefit of these parties. Where applicable, registered easements and utility rights-of-way affecting the extent of the Property have been shown on this plan. Unless shown otherwise, property corner markers have not been placed during the survey for this Report.

This plan should not be used to establish boundaries (e.g. for fencing) because of the risk of misinterpretation or measurement error by the user.

The information shown on this Report reflects the status of this Property as of the date of survey only. Users are encouraged to have the Real Property Report updated for future requirements because subsequent development changes on the property will not be reflected on the Report.

ALBERTA LAND SURVEYORS' ASSOCIATION PERMIT NUMBER P196 MAIDMENT LAND SURVEYS LTD.

Patrick L. Marshall, ALS
Dated at Calgary, Alberta
on January 12, 2022

This document is not valid unless it bears the original signature or digital signature of an Alberta Land Surveyor and a Maidment Land Surveys Ltd. permit stamp.

MAIDMENT LAND SURVEYS LTD.
10, 141 Commercial Drive 403.286.0501
Calgary, AB T3Z 2A7 www.maidment.ca

File Number: 121226rpr

ALBERTA LAND SURVEYOR'S

REAL PROPERTY REPORT

LOT: 4 BLOCK: 2 PLAN: 151 2150

MUNICIPAL ADDRESS: 242253 West Bluff Road, Rocky View County ("the Property")

CLIENT: Unruh

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OD	Overland Drainage	Re-est.	Re-established
O/H	Overhead	Mp.	Marker post
PP	Power pole	AGL	Above ground level
⇐	Power pole anchor	BGL	Below ground level
		FL	Fence line

INSTRUMENT 151 234 990 – METES & BOUND DESCRIPTION RESTRICTIVE COVENANT.

ALBERTA LAND SURVEYOR'S CERTIFICATION:

I hereby certify that this report, which includes this plan and related survey, was prepared and performed under my personal supervision and in accordance with the Alberta Land Surveyors' Association's Manual of Standard Practice and supplements thereto. Accordingly, within those standards and as of the date of this report, I am of the opinion that:

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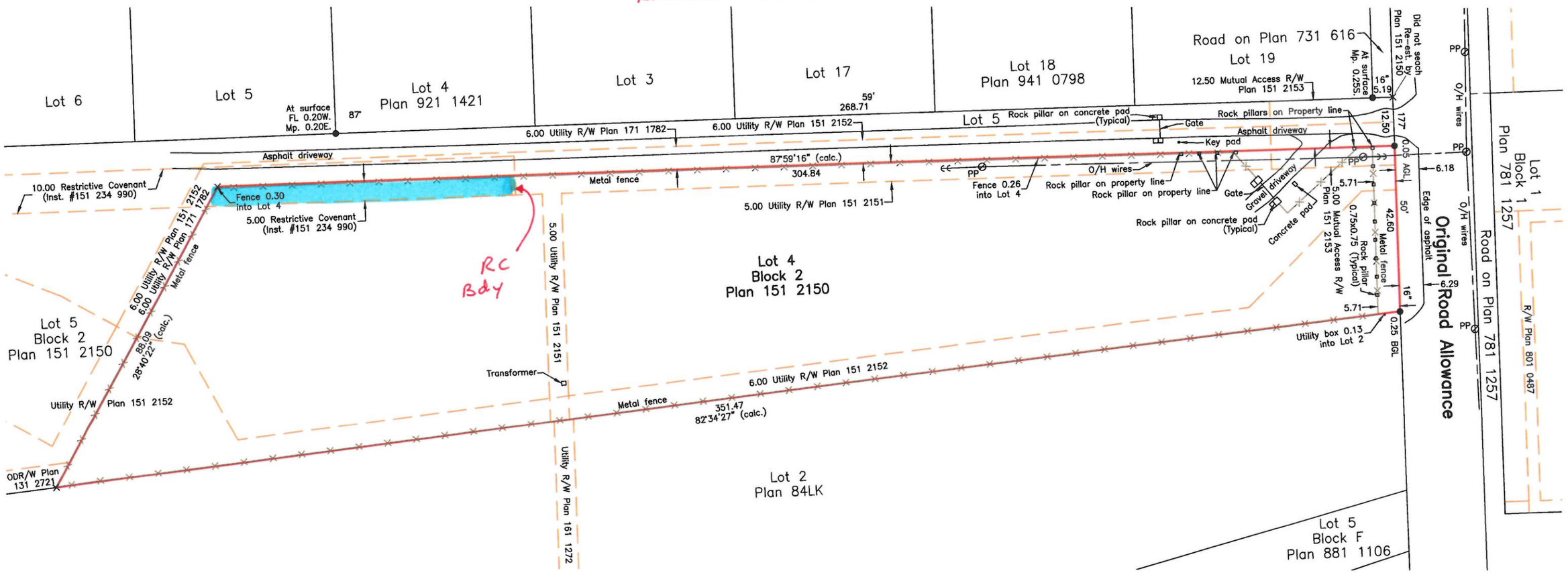
   #151 190 262 – Caveat Re: Development Agreement Pursuant to Municipal Government Act



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ALBERTA LAND SURVEYORS' ASSOCIATION PERMIT NUMBER P196 MAIDMENT LAND SURVEYS LTD.

Patrick L. Marshall, ALS
Dated at Calgary, Alberta
on January 12, 2022

This document is not valid unless it bears the original signature or digital signature of an Alberta Land Surveyor and a Maidment Land Surveys Ltd. permit stamp.

MAIDMENT LAND SURVEYS LTD.
10, 141 Commercial Drive Calgary, AB T3Z 2A7
403.286.0501 www.maidment.ca

File Number: 121226rpr

ALBERTA LAND SURVEYOR'S

REAL PROPERTY REPORT

LOT: 4 BLOCK: 2 PLAN: 151 2150

MUNICIPAL ADDRESS: 242253 West Bluff Road, Rocky View County ("the Property")

CLIENT: Unruh

SCALE: 1: 1000

Date of Survey: January 12, 2022 Date of Title Search: December 9, 2021

NOTES:

1. Found Iron Post shown thus: ●
2. Established temporary point and left no mark shown thus: ×
3. Property boundaries shown thus: ———
4. Easements and Right of Ways shown thus: — — —
5. Distances are in metres.
6. Calculated boundaries are derived from Plan 151 2150 and have been shown thus: (calc.)
7. Fences shown are within 0.20 of the Property line unless noted and shown thus: —×—
8. Abbreviations that may be used in this report include:

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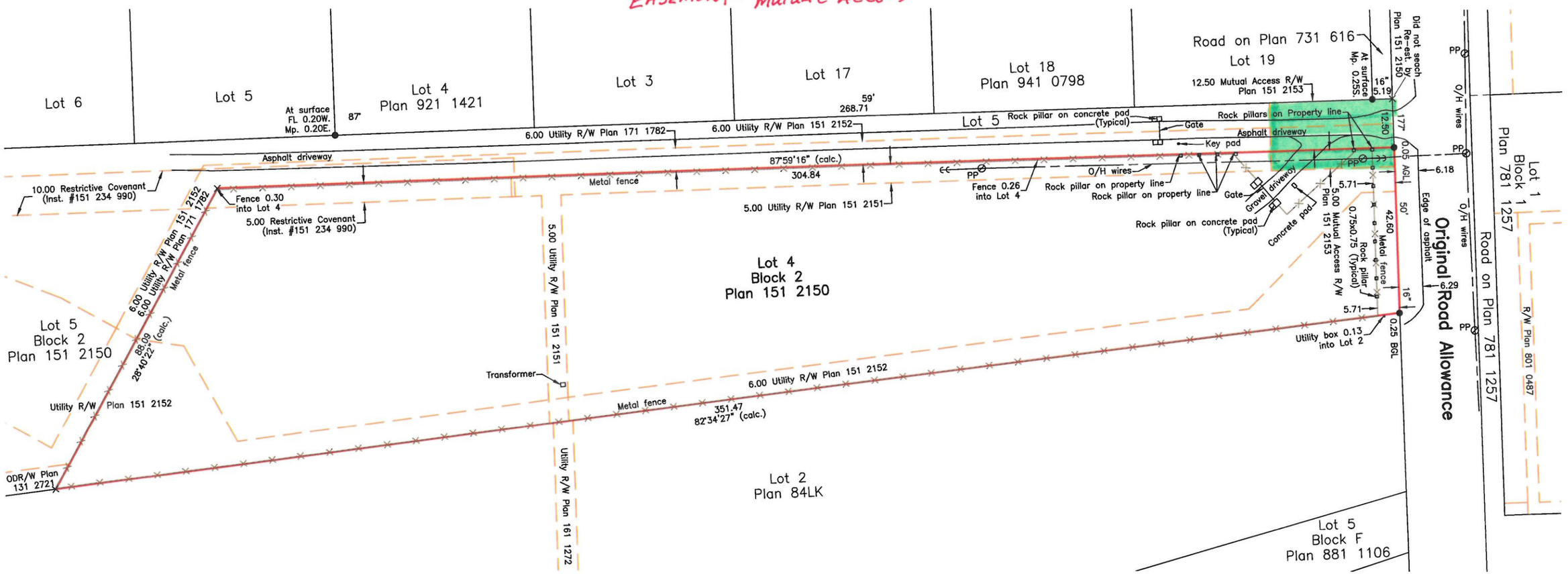
   #151 190 262 – Caveat Re: Development Agreement Pursuant to Municipal Government Act

INSTRUMENT 151 190 264 - PLAN 151 2153
EASEMENT - MUTUAL ACCESS



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Patrick L. Marshall, ALS
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CLIENT: Unruh

SCALE: 1:1000

Date of Survey: January 12, 2022 Date of Title Search: December 9, 2021

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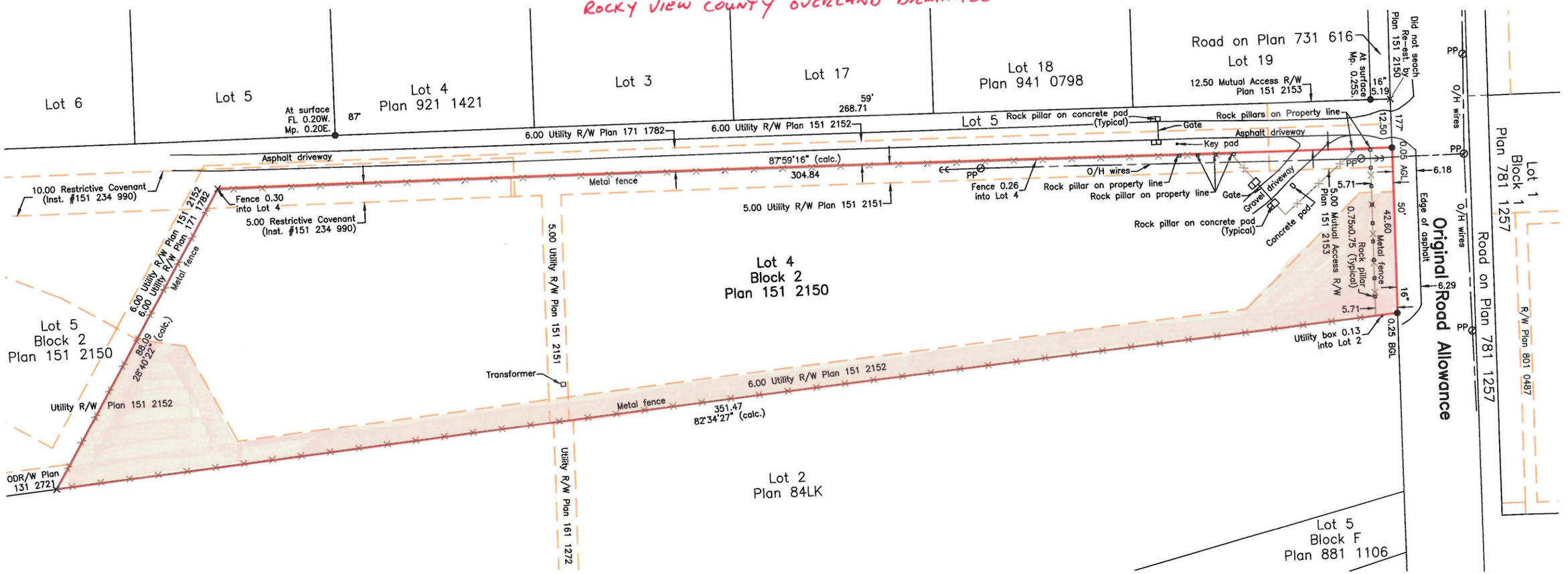
INSTRUMENT 151 190 261 - PLAN 151 2152
ROCKY VIEW COUNTY OVERLAND DRAINAGE



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File Number: 121226rpr

OSPREY ENGINEERING INC.
BOX 1367 · BLACK DIAMOND, ALBERTA · T0L 0H0 CANADA
TEL: 403.933.2226 · EMAIL: ospreyeng@gmail.com

26 March 2024

Our file: 240927
Municipal file: PRDP20240118

Rocky View County
262075 Rocky View Point
Rocky View County, AB T4A 0X2

Attention: Jeevan Wareh

RE: Lang-Hodge Residence
242253 Westbluff Road (Lot 4, Blk. 2, Plan 1512150, NE18-24-2-5)
Site Specific Stormwater Implementation Plan (SSIP)

Dear Jeevan,

This letter is provided to address the following condition on the *Notice of Decision* dated 2023-08-22:

> *Prior to release, the Applicant/Owner shall submit a limited scope Site-Specific Stormwater Implementation Plan (SSIP) prepared by a qualified professional engineer, in accordance with Springbank Drainage Strategies [(Westhoff, 2004)] and County Servicing Standards [(Rocky View County, 2013)]. The SSIP must include a grading plan that illustrates the original ground profile; the depth of proposed fill; the total amount of soil to be imported/exported from the site; and analysis of the pre and post construction grades to determine whether there are any impacts to adjacent properties or the public road network. The engineer shall confirm pre and post construction conditions associated with site stormwater storage, unit area site releases, volume control target, and offsite drainage in accordance with recommendations of Springbank Drainage Strategies. The analysis shall also include recommendations for Erosion and Sediment control mitigation measures, as per County Servicing Standards.*

I. BACKGROUND

242253 Westbluff Road is a country residential lot of 1.90 ha [4.70 acres] more or less located near the south end of Westbluff Road (see Figure 1 for general location). The parcel is presently vacant. The owner intends to construct a dwelling as shown on the architectural plans submitted to the county (excerpts included in this letter).

The parcel drains generally from east to west. The west portion of the parcel slopes steeply toward the southwest. Runoff from this slope flows overland to Clear Mountain Rise and Lower Springbank Road. Runoff in this area is tributary to the Elbow River near Highway 8. The general area is shown on Figure 2.

The *Springbank Master Drainage Plan* (Seeliger, 2016) (the MDP) is understood to be applicable. This plan is understood to generally describe how storm drainage *should* be managed in Springbank. However, an older document, *Drainage Strategies for Springbank* (Westhoff, 2004) served as the *de facto* master drainage plan at the time of subdivision.

A stormwater management plan was provided in 2013 in support of a subdivision which created the predecessor to this parcel and the lot immediately north (Bhaiji, 2013). A revision to this plan was provided in 2015 (Bhaiji, 2015). The current parcel boundaries were established in 2015.

The reports assumed the following regarding runoff from the subdivision:

- Unit area release rate: 1.714 L/s/ha
- No annual volume target

The stormwater management plan assumed the imperviousness of the lot would be approximately 440 m² including

To meet this release rate, it is understood that 3 ponds were specified as follows:

- One pond (341 m³) in the southwest of Lot 5 at the edge of the steep slope,
- One pond (476 m³) in the west of the subject parcel (immediately south of the pond in Lot 5) and
- One pond (365 m³) in the southeast of the subject parcel adjacent to Westbluff Road.

The ponds were constructed in support of the subdivision and rights-of-way exist to contain them.

II. DISCUSSION

The site plan for the proposed dwelling (Dean Thomas Design Group, revision dated 2024-02-02) was provided by McKinley Masters. Other details are from publicly available data (AltaLIS Lidar 15 DEM, Google air photos) (see **Error! Reference source not found.**).

The following are notable:

- The grading plan provided by Dean Thomas appears reasonable.
- There is a clear path for runoff to the pond.
- Existing lot grading to the west directs runoff away from structures.
- Impervious surfaces
- Impervious surfaces (including roofs, asphalt and concrete driveways) total approximately 4078 m² which is 21% of the total lot area:
    - The revised stormwater management plan (2015) for the parcel assumed a total impervious area of 440 m², including driveways.
    - Imperviousness in the east portion appears to be similar to what was previously predicted. No further concern is noted for the east portion of the parcel.
    - Imperviousness in the west 1.57 ha will be approximately 23.9%. This is approximately 10× larger than previous estimates.

Given the oversized dwelling proposed, stormwater management for the parcel must be revised. As no as-built survey was provided for the ponds, it is assumed they were constructed according to the stormwater management plan:

- Pond area at spill: 344 m²
- Pond depth at spill: 2.5 m above outlet pipe invert (3.2 m above flow control)
- Pond volume at spill: 476 m³
- Rate of discharge at spill: 2.4 L/s [0.0024 m³/s] (approx. 1.5 L/s/ha)

An EPA-SWMM model was constructed to determine the impact of the dwelling as proposed. This resulted in the pond flooding. As such, a larger pond is required to maintain the runoff from the parcel to the rate noted in 2015 and 2013 stormwater management plans. Based on analysis, the pond needs to

contain approximately 1100 m³ (630 m³ larger) below spill to maintain the rate of runoff prescribed in the previous stormwater management plan.

III. RECOMMENDATIONS AND CONCLUSION

Given the above, I assert the following:

- That the grading proposed is reasonable for the dwelling proposed.
- That adequate management of runoff can be accomplished provided the recommendations of this plan are followed.

The following recommendations are made specific to the development of proposed the proposed lot:

- That the pond should be expanded to ensure a volume of at least 1100 m³ is available below the spill elevation.
- All private sewage components shall be located above and at least 15 m from the spill contour of the pond.
- That all buildings shall be located outside areas of concentrated flow.
- That in conducting any construction the following general guidelines should be observed:
    - Land will be graded to ensure positive drainage.
    - Slopes will be kept as gentle as possible and within the range of 1% to 10% for side slopes and 1% to 3% for longitudinal slopes in ditches/swales.
    - Where necessary, limited areas [3 m or less] of steeper side slopes, up to 33% [3H:1V] can be accommodated provided they are adequately protected from erosion.
    - Slopes greater than those noted above will require specific measures (see below) to ensure erosion is controlled.
    - Where areas are disturbed, topsoil will be placed to a depth of not less than 200 mm [8"] and preferably 300 mm [12"] or more.
    - Placement of native topsoil from within the parcel is acceptable.
    - If imported topsoil is used it will have a clay content less than 40%, be more than 3% organic matter, have a sodium adsorption ratio (SAR) in the "good" range for plant growth, and have a neutral pH.
    - All disturbed areas will be seeded or sodded to ensure a good cover of vegetation as soon as practical, and
    - Specific species of vegetation will be at the proponent's discretion but regardless will be appropriate for the area and location planted.
- As the proponent is aware of the legal risks and penalties associated with unauthorized discharge of sediment into a water body, during any construction, the proponent will employ "good housekeeping practices" for erosion and sedimentation control on this site. This includes:
    - Locating any material stockpiles away from drainage courses, water bodies or areas of concentrated runoff flows.
    - Protecting stockpiles from the effects of wind.
    - Ensuring material will be temporary and will be removed or stabilized as noted below.
    - Ensuring that all bare earth is suitably stabilized with topsoil and an appropriate mulch and seed mix to allow establishment of vegetative cover as soon as possible. Alternately, bare slopes can be covered with a suitable, commercially-available erosion control matting (e.g. coco, hemp, geotextile).
- Any products proposed for use in erosion and sedimentation control shall be appropriate for their application. If any questions exist in this regard, the owner will contact a professional engineer or other professional skilled in erosion control (e.g. P.Ag. or CPESC) to provide recommendations, and

- A further reference for erosion and sedimentation control best practices is *Erosion and Sediment Control Field Manual* (Calgary (City of), 2017), which is available at no cost from www.calgary.ca.

If you have any questions regarding this report, please contact the undersigned.

Yours truly,

ID 67456
2024-03-26

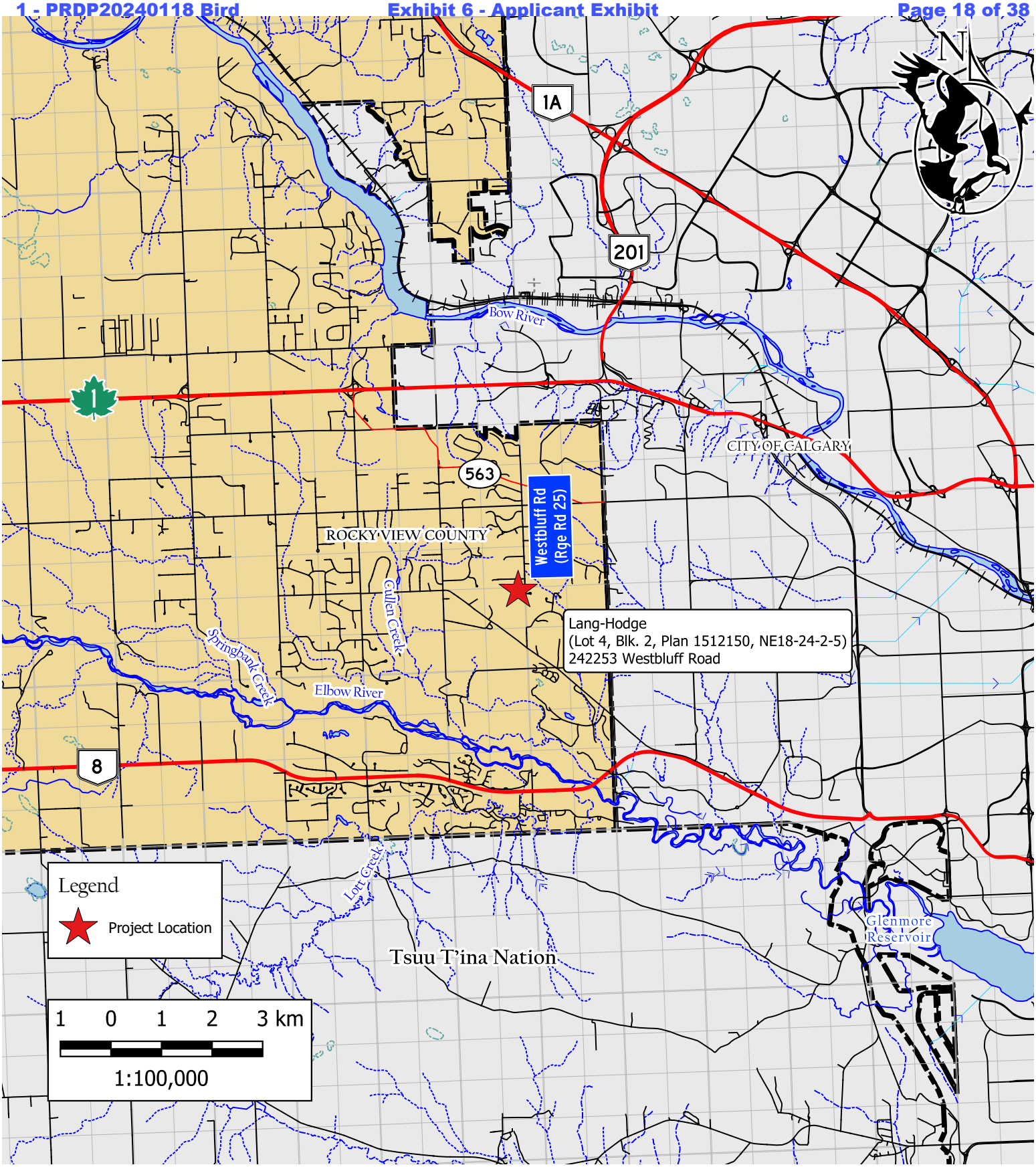
Michael A. Kitchen, P.Eng.
President

PERMIT TO PRACTICE
OSPREY ENGINEERING INC.
RM SIGNATURE:
RM APEGA ID #: 67456
DATE: 2024-03-26
PERMIT NUMBER: P010743
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

MAK/

Encl.

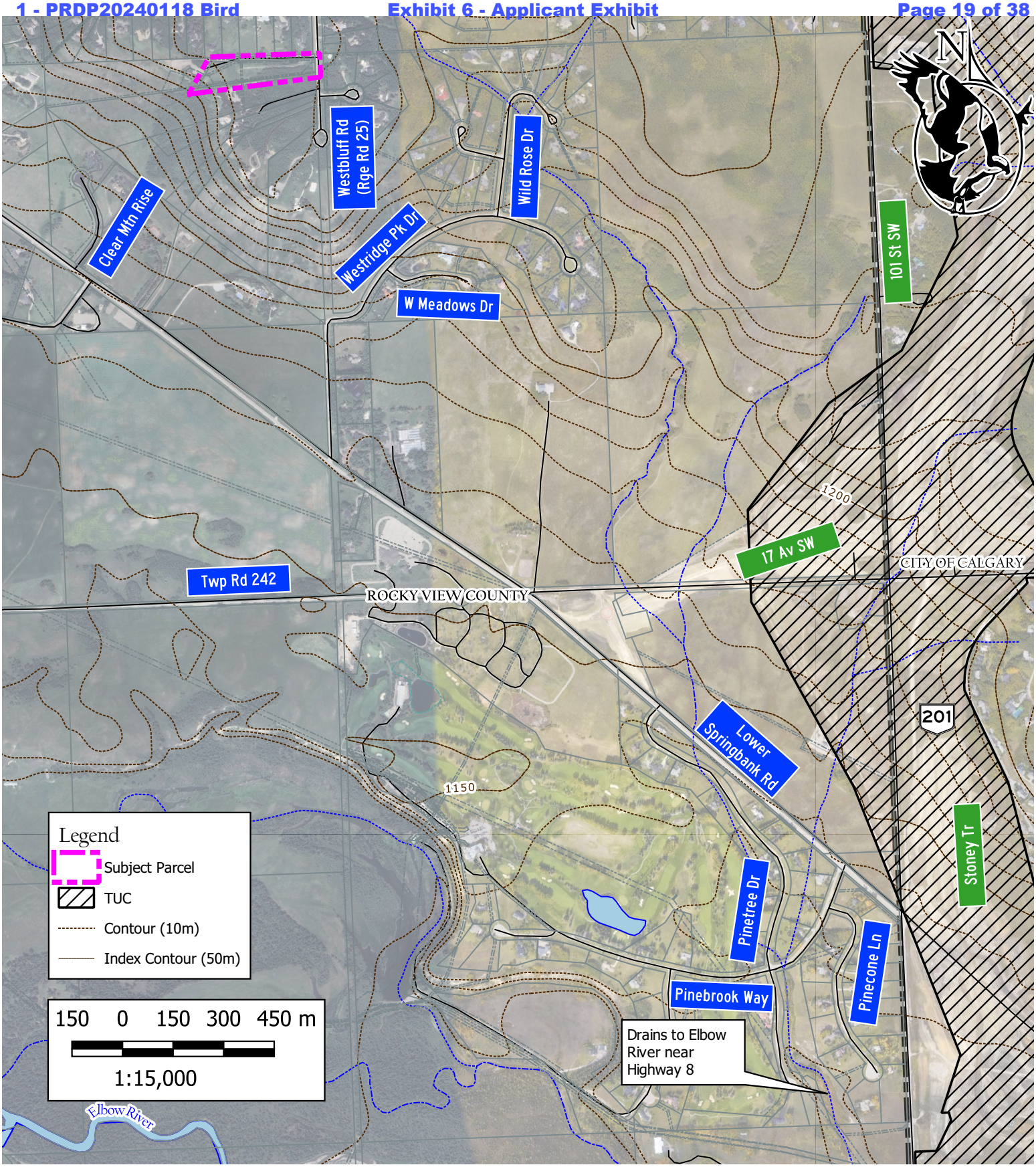
cc: Cody Dunn – McKinley Masters
File



SPREY ENGINEERING INC.

Lang- Hodge Residence
Site Specific Stormwater
Implementation Plan (SSIP)

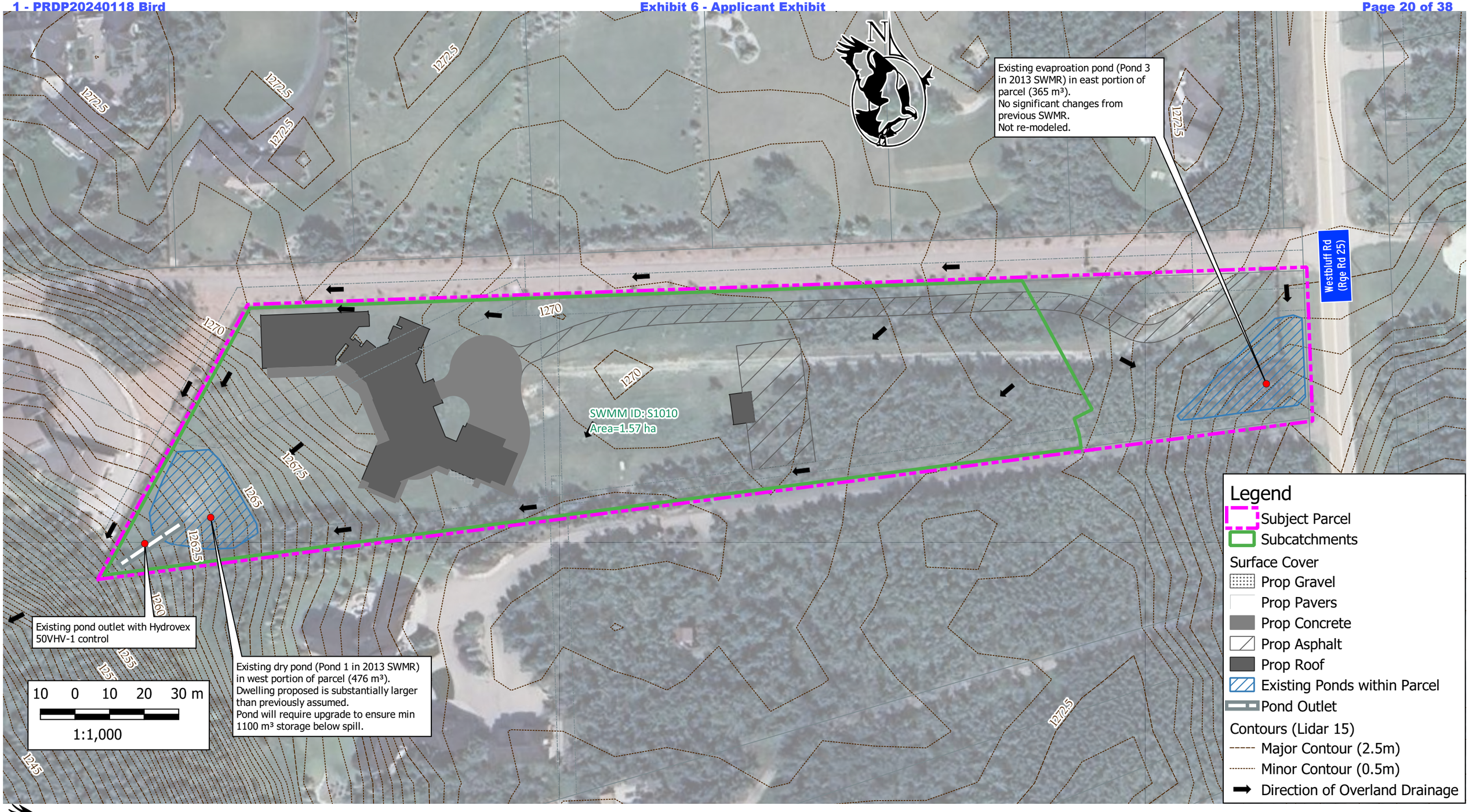
Figure 1 – Location



SPREY ENGINEERING INC.

Lang- Hodge Residence
Site Specific Stormwater Implementation Plan (SSIP)

Figure 2 – Area Context



OSPREY ENGINEERING INC.

Lang- Hodge Residence
Site Specific Stormwater Implementation Plan (SSIP)

Figure 3 - Surface Features

APPENDIX A – EPA SWMM MODEL

The following contains the results from the EPA-SWMM model constructed for the Lang-Hodge residence. Note that, similar to the previous stormwater management plans, the release rate from the site is so low that longer-term precipitation governs pond volumes. As such, only the continuous precipitation data set (1960-2010) was reviewed. The City of Calgary 1:100-year, 24-hour design storm (Calgary (City of), 2011) will not govern design and was not reviewed.

A. Hydrology

Storm drainage area (subcatchment) boundaries are shown on **Error! Reference source not found.**. Table 1 details the specific hydrologic assumptions made for each subcatchment in EPA-SWMM. Assumptions common to all subcatchments are detailed in Table 2.

Table 1 – Subcatchment Parameters

Subcatchment ID	Runoff Drains to (ID)	Area (ha)	Width (m)	Flowpath Length (m)	Slope (%)	Imperviousness (%)
S1010	SU101	1.57	263	60	5.6	23.9

Table 2 – General Hydrologic Assumptions

Parameter	Value	Source
Surface roughness (Manning's n)	Impervious = 0.015 Pervious = 0.25	Pervious assumes lawn or pasture (American Society of Civil Engineers, 1992)
Depression storage	Imperv.: 1.6 mm Pervious: 3.2 mm (backslope, 150 mm topsoil) 7.5 mm (absorbent landscaping, 300 mm topsoil)	Impervious is as per developed areas, on-site pervious assumes absorbent landscaping: 0.3 m loamy topsoil, minimum.
Sub-area routing	Pervious	Routes both impervious surfaces as no storm sewers exist
Soil characteristics (Green-Ampt)	Clay loam K = 1.0 mm/hr ψ = 210 mm IMD = 0.27	(Rossman & Huber, 2016)

1. Imperviousness

Assumed imperviousness for different cover types are as prescribed by the City of Calgary (Calgary (City of), 2011). Overall imperviousness for each subcatchment was

derived using an area-weighted average based on the proposed sited development plan provided by the owner.

2. Evaporation

Evaporation in EPA-SWMM is calculated internally (Rossman & Huber, 2016) based on approved climate data (daily maximum and minimum temperatures) for Calgary. No evaporation is assumed in single-event modelling.

3. Seasonal Variation of Parameters

Seasonal variation of parameters (hydraulic conductivity) was assumed per the following:

- May to October: 1×value noted in Table 2.
- November to April: 0.05×value noted in Table 2.

This is not applicable to single-event models.

4. Snowmelt

Snowmelt is considered as noted in Table 3. This is not applicable to single-event models.

Table 3 – Snowmelt Parameters

Parameter	Value
Dividing temperature between rain and snow	2°C
Antecedent temperature index	0.5
Negative melt ratio	0.6
Elevation above MSL	1080 m
Latitude	51°N
Longitude correction	36 min (Mtn. Std. Time [105°W] to 114°W)
Minimum melt coefficient	0.05 mm/hr/°C
Maximum melt coefficient	0.3 mm/hr/°C
Base temperature for melt	0°C
Free water fraction to produce liquid	0.1

The monthly average windspeeds shown in Table 4 were used in the snowmelt model.

Table 4 – Average Windspeeds (km/h) for Calgary Airport

January	February	March	April	May	June
14.8	14.6	15	16.5	16.6	15.6
July	August	September	October	November	December
14	13.2	14.1	14.6	13.7	14.9

B. Pond Design

The existing pond was assumed from the 2013 stormwater modeling (Bhaiji, 2013), and its stage-storage relationship is shown in Table 5.

Table 5 – Stage Storage Assumed for Existing Pond (SWMM Node SU101)

Elevation (m AGD)	Depth (m)	Surface Area (m^2)	Volume Detained (m^3)	
1261.10	0.00	1		Invert of control
1261.79	0.69	1	1	
1261.80	0.70	34	1	Invert of outlet
1264.30	3.20	344	473	Spill

1. Offsite Flow Control

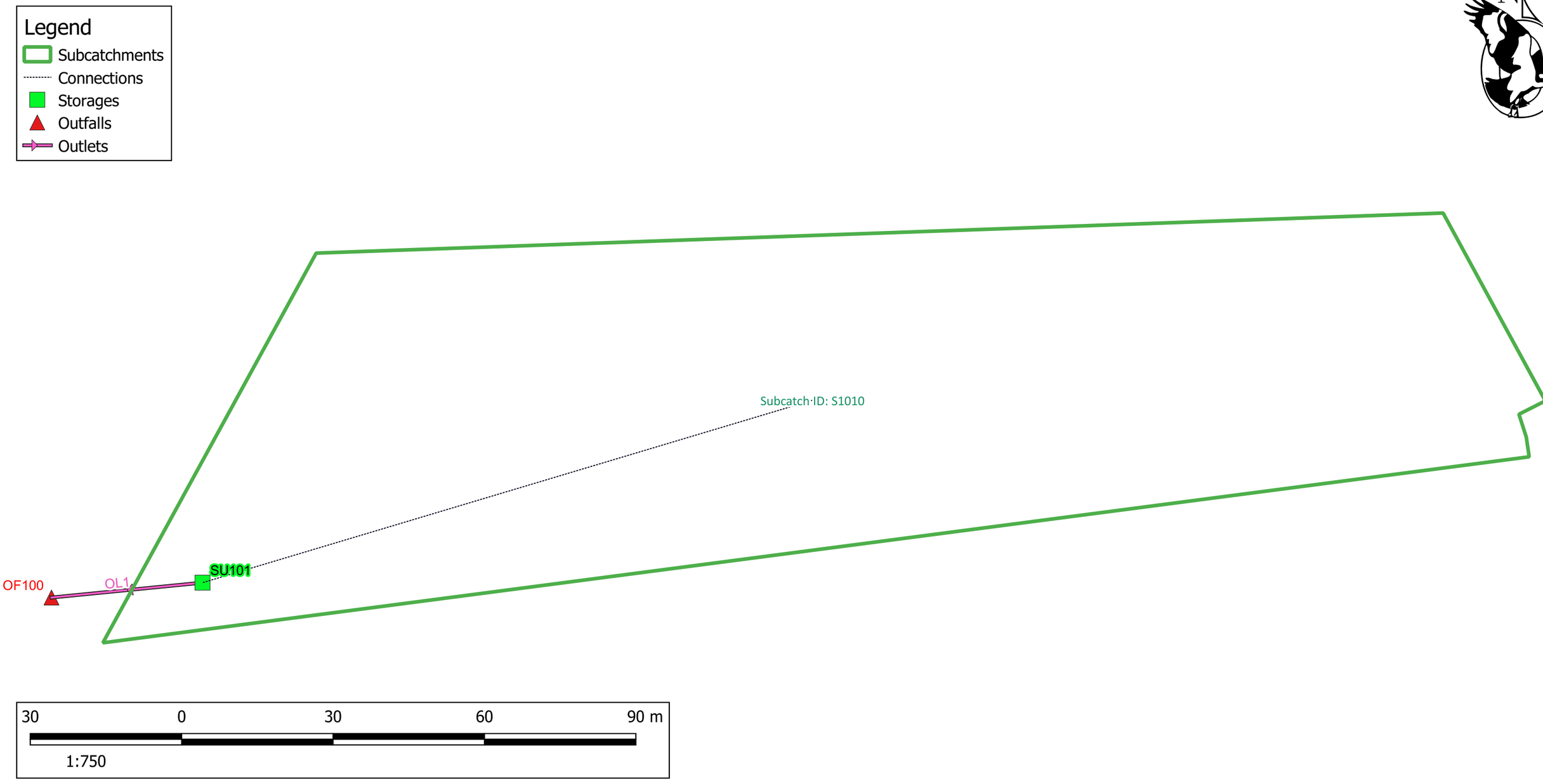
Consistent with the previous stormwater management plans and the *de facto* MDP at subdivision, offsite runoff has an allowable unit release rate (AURR) of 1.714 L/s/ha. Offsite flow control for the minor system assumes inlet control devices (ICDs) on the pond control manhole. A Hydrovex 50VHV-1 control was specified. Outflow was assumed per Table 6 and was derived the manufacturer's published performance curves.

Table 6 – Flow Control

Depth/Head (m)	Flow (m^3/s)
0	0
0.65	0.001
1.3	0.0015
2.5	0.002
5.7	0.003

2. Determining Required Volume

The required volume for the pond was determined by an extreme value analysis of annual pond volumes. This analysis was consistent with that prescribed by the City of Calgary (McMechan, et al., 2014). This required a second scenario with a pond of a large but arbitrary volume to ensure no flooding (overflow). This volume will guide detail design of the pond expansion. Results of the frequency analysis are appended.



OSPREY ENGINEERING INC.

Lang- Hodge Residence
Site Specific Stormwater Implementation Plan (SSIP)

Figure 4 - EPA-SWMM Model Schematic

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
--------------------------------------------------------------

Lang-Hodge - Post-dev with ex pond - Continuous

*************
Element Count
*************
Number of rain gages ...... 1
Number of subcatchments ... 1
Number of nodes ........... 2
Number of links ........... 1
Number of pollutants ...... 0
Number of land uses ....... 0


****************
Raingage Summary
****************
                                                  Data       Recording
Name                 Data Source                  Type       Interval
------------------------------------------------------------------------
Raingage             I:\Data\SWMM\Climate Data\Calgary Approved Data\Final_Hour_Precip_Data HLY03.txt


********************
Subcatchment Summary
********************
Name                         Area     Width   %Imperv    %Slope Rain Gage            Outlet
------------------------------------------------------------------------------------------------
S1010                        1.57    263.05     23.88    5.6170 Raingage             SU101


*************
Node Summary
*************
                                       Invert      Max.    Ponded    External
Name                 Type                Elev.     Depth      Area    Inflow
------------------------------------------------------------------------------
OF100                OUTFALL           1260.77      0.00       0.0
SU101                STORAGE           1261.10      3.20       0.0


*************
Link Summary
*************
Name             From Node        To Node          Type            Length    %Slope Roughness
-----------------------------------------------------------------------------------------------
OL1              SU101            OF100            OUTLET


*********************
Cross Section Summary
*********************
                                  Full     Full     Hyd.     Max.   No. of     Full
Conduit          Shape           Depth     Area     Rad.    Width  Barrels     Flow
-------------------------------------------------------------------------------------


*****************
Analysis Options
*****************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... YES
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... MODIFIED_GREEN_AMPT
Flow Routing Method ...... KINWAVE
Starting Date ............ 01/01/1960 00:00:00
Ending Date .............. 01/01/2010 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 01:00:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 30.00 sec


*********************
Rainfall File Summary
*********************
Station    First        Last         Recording   Periods    Periods    Periods
ID         Date         Date         Frequency  w/Precip    Missing    Malfunc.
-------------------------------------------------------------------------------
3031093    01/02/1960   12/31/2009      60 min     27424          0          0


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Initial Snow Cover .......         0.000         0.000
Total Precipitation ......        32.210     20455.700
Evaporation Loss .........         4.662      2960.785
Infiltration Loss ........        24.161     15344.478
Surface Runoff ...........         3.419      2171.096
Snow Removed .............         0.000         0.000
Final Snow Cover .........         0.027        17.266
Final Storage ............         0.000         0.000
Continuity Error (%) .....        -0.185


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------      ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         3.419        34.186
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         3.277        32.768
Flooding Loss ............         0.132         1.323
Evaporation Loss .........         0.009         0.093
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.000
Continuity Error (%) .....         0.006
```

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 30.00 sec
Average Time Step : 30.00 sec
Maximum Time Step : 30.00 sec
% of Time in Steady State : 0.00
Average Iterations per Step : 1.00
% of Steps Not Converging : 0.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
S1010	20455.70	0.00	2960.79	15344.48	3177.63	2171.10	2171.10	34.19	0.22	0.106

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
OF100	OUTFALL	0.00	0.00	1260.77	0 00:00	0.00
SU101	STORAGE	0.02	3.20	1264.30	3816 13:27	3.20

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
OF100	OUTFALL	0.000	0.002	3816 13:27	0	32.8	0.000
SU101	STORAGE	0.223	0.223	17322 19:00	34.2	34.2	0.006

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Volume 1000 m³
SU101	18.90	0.221	17322 19:00	1.323	0.000

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 m³	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m³	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
SU101	0.001	0.2	0.3	0.0	0.473	100.0	3816 13:27	0.002

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
OF100	1.49	0.001	0.002	32.768
System	1.49	0.001	0.002	32.768

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
OL1	DUMMY	0.002	3816 13:27			

****
Conduit Surcharge Summary
****

No conduits were surcharged.

Analysis begun on: Mon Mar 25 17:27:26 2024
Analysis ended on: Mon Mar 25 17:27:42 2024
Total elapsed time: 00:00:16

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
--------------------------------------------------------------

Lang-Hodge - Post-dev with rev pond - Continuous

*************
Element Count
*************
Number of rain gages ...... 1
Number of subcatchments ... 1
Number of nodes ........... 2
Number of links ........... 1
Number of pollutants ...... 0
Number of land uses ....... 0


****************
Raingage Summary
****************
                                                  Data       Recording
Name                 Data Source                  Type       Interval
------------------------------------------------------------------------
Raingage             I:\Data\SWMM\Climate Data\Calgary Approved Data\Final_Hour_Precip_Data HLY03.txt


********************
Subcatchment Summary
********************
Name                         Area     Width   %Imperv    %Slope Rain Gage            Outlet
------------------------------------------------------------------------------------------------
S1010                        1.57    263.05     23.88    5.6170 Raingage             SU101


*************
Node Summary
*************
                                    Invert      Max.    Ponded    External
Name                 Type            Elev.     Depth      Area    Inflow
-----------------------------------------------------------------------
OF100                OUTFALL       1260.77      0.00       0.0
SU101                STORAGE       1261.10      3.20       0.0


*************
Link Summary
*************
Name             From Node        To Node          Type            Length    %Slope Roughness
-----------------------------------------------------------------------------------------------
OL1              SU101            OF100            OUTLET


*********************
Cross Section Summary
*********************
                                  Full     Full     Hyd.     Max.   No. of     Full
Conduit          Shape           Depth     Area     Rad.    Width  Barrels     Flow
-----------------------------------------------------------------------------------


*****************
Analysis Options
*****************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... YES
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... MODIFIED_GREEN_AMPT
Flow Routing Method ...... KINWAVE
Starting Date ............ 01/01/1960 00:00:00
Ending Date .............. 01/01/2010 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 01:00:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 30.00 sec


*********************
Rainfall File Summary
*********************
Station    First        Last         Recording   Periods    Periods    Periods
ID         Date         Date         Frequency  w/Precip    Missing    Malfunc.
-----------------------------------------------------------------------------
3031093    01/02/1960   12/31/2009      60 min     27424          0          0


*************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
*************************     ---------       -------
Initial Snow Cover .......         0.000         0.000
Total Precipitation ......        32.210     20455.700
Evaporation Loss .........         4.662      2960.785
Infiltration Loss ........        24.161     15344.478
Surface Runoff ...........         3.419      2171.096
Snow Removed .............         0.000         0.000
Final Snow Cover .........         0.027        17.266
Final Storage ............         0.000         0.000
Continuity Error (%) .....        -0.185


*************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
*************************     ---------      ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         3.419        34.186
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         3.165        31.649
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.254         2.537
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.000
Continuity Error (%) .....         0.001
```

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 30.00 sec
Average Time Step : 30.00 sec
Maximum Time Step : 30.00 sec
% of Time in Steady State : 0.00
Average Iterations per Step : 1.00
% of Steps Not Converging : 0.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
S1010	20455.70	0.00	2960.79	15344.48	3177.63	2171.10	2171.10	34.19	0.22	0.106

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
OF100	OUTFALL	0.00	0.00	1260.77	0 00:00	0.00
SU101	STORAGE	0.01	2.38	1263.48	17323 11:14	2.38

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
OF100	OUTFALL	0.000	0.002	17323 11:14	0	31.6	0.000
SU101	STORAGE	0.223	0.223	17322 19:00	34.2	34.2	0.001

****
Node Flooding Summary
****

No nodes were flooded.

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 m³	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m³	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
SU101	0.005	0.4	7.4	0.0	0.952	74.4	17323 11:14	0.002

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
OF100	8.83	0.000	0.002	31.649
System	8.83	0.000	0.002	31.649

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
OL1	DUMMY	0.002	17323 11:14			

****
Conduit Surcharge Summary
****

No conduits were surcharged.

Analysis begun on: Tue Mar 26 10:06:48 2024
Analysis ended on: Tue Mar 26 10:07:04 2024
Total elapsed time: 00:00:16

Summary Sheet

Initial Statistical Tests:

Tests for Stationarity

Test	Result
Spearman Rank Order Correlation Coefficient	No Significant Trend at 0.05 Significance Level
Mann-Whitney Test for jump (a.k.a. Mann-Whitney U test)	No Jump at 0.05 Significance Level
Wald-Wolfowitz Test (The runs test)	No Jump at 0.05 Significance Level

Tests for Homogeneity

Test	Result
Mann-Whitney Test for jump (a.k.a. Mann-Whitney U test)	Sample is Homogeneous at 0.05 Significance Level
Terry Test	Sample is Homogeneous at 0.05 Significance Level

Tests for Independence

Test	Result
Spearman Rank Order Correlation Coefficient	Data is independent at 0.05 Significance Level
Wald-Wolfowitz Test for Independence	Data is independent at 0.05 Significance Level
Anderson Test	Data is independent at 0.05 Significance Level

Test for Outliers

Test	Result
Grubbs and Beck Test for Outliers	
Are any high outliers present?	No High Outliers Present
Are and low outliers present?	No Low Outliers Present

Project Information

Project Name:	Land-Hodge
Project Description:	Dry pond on private lot
Location:	242253 Westbluff Road, RVC
Date:	2024-03-26
Designed by:	MAK
Company Name:	Osprey Engineering Inc.
Reviewed by:	MAK

Numerical Goodness-of-fit Tests Results

Distribution Type	Numerical Goodness-of-fit Tests from Spreadsheet			Average of Ranks	Ranking from Numerical Tests	Numerical Goodness-of-fit Tests from Hyfran (Input by user)		Notes from Visual Goodness-of-fit Test
	A-D Test	K-S Test	Least Squares Ranking			BIC	AIC	
Normal	9	8	9	8.67	9			
Lognormal	2	6	3	3.67	2			
Lognormal III	5	3	5	4.33	5			
Exponential	8	9	4	7.00	8			
Pearson III	3	7	2	4.00	4			
Log Pearson III	1	5	1	2.33	1			
Gumbel	7	4	8	6.33	7			
GEV			10					
Weibull	6	2	7	5.00	6			
Gamma	4	1	6	3.67	2			

The City of Calgary Water Resources
Data and Frequency Analysis Spreadsheet for the City of Calgary - Version 1.2 - February 2014

2024-02-26

Selected Distribution and Results

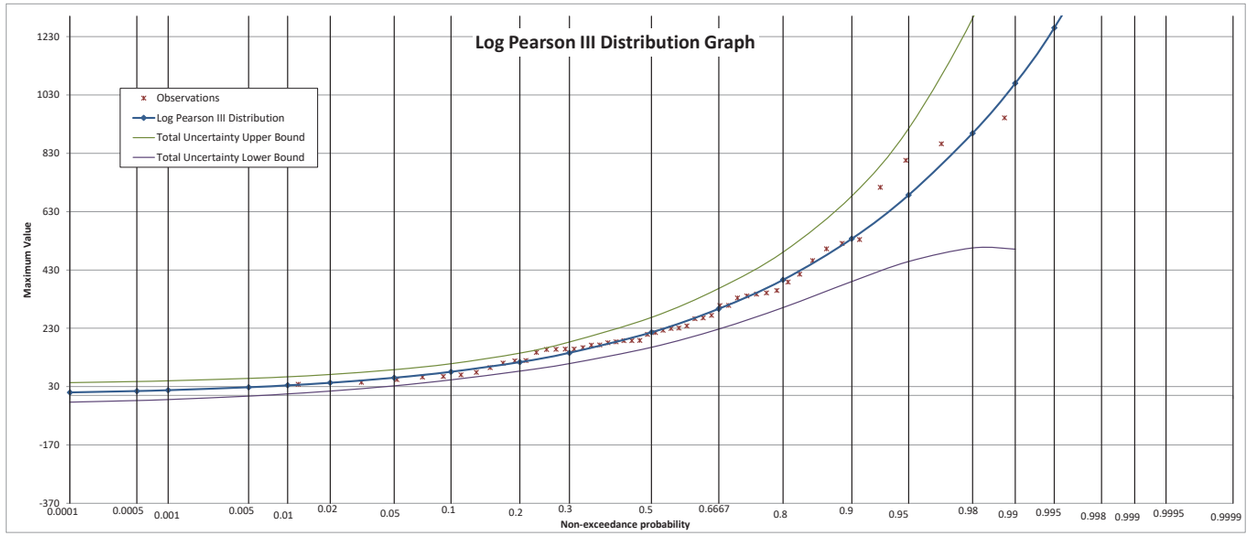
Instructions:

Distribution type chosen based on visual and numerical goodness-of-fit tests: **Log Pearson III**

- Based on the results of the numerical and visual goodness-of-fit tests presented above, choose the preferred distribution in the cell on the left

Return Period	Probability	Magnitude	Total Uncertainty (Upper Bound)	Total Uncertainty (Lower Bound)
10000	0.9999	2500	#N/A	#N/A
2000	0.9995	1950	#N/A	#N/A
1000	0.9990	1730	#N/A	#N/A
500	0.9980	1540	#N/A	#N/A
200	0.9950	1260	#N/A	#N/A
100	0.9900	1070	1640	501
50	0.9800	899	1290	506
20	0.9500	687	915	459
10	0.9000	537	684	390
5	0.8000	396	491	301
3	0.6667	297	367	227
2	0.5000	216	267	165
1.4286	0.3000	146	183	109
1.25	0.2000	114	145	83.2
1.1111	0.1000	80.9	109	53.3
1.0526	0.0500	60.4	88.1	32.7
1.0204	0.0200	43.2	71.7	14.7
1.0101	0.0100	34.4	63.7	5.11
1.005	0.0050	27.8	58.2	-2.6
1.001	0.0010	17.8	49.9	-14.3
1.0005	0.0005	14.9	47.5	-17.7
1.0001	0.0001	10.2	43.6	-23.2

*Total uncertainty is based on sampling uncertainty at ((95%) Confidence Interval) plus distribution uncertainty of Top 4 distributions (based on numerical goodness of fit tests)



Errors and Warnings

Cumulative distribution function warning
No warning
No warning
No warning
No warning
CDF based on parameters does not match Pearson III distribution
No warning
No warning
CDF based on parameters does not match GEV distribution
No warning
No warning

If a warning is present, please check if hyfran output results were pasted correctly. If hyfran results were pasted correctly the warning signifies that the Continuous Distribution Function (CDF) used in this workbook does not produce same output values as the input frequency analysis results, which in turn indicates that the numerical goodness-of-fit tests calculated by this spreadsheet for this distribution may be based on inaccurate numbers. Another possible solution would be to use a different method of estimating the CDF parameters for example: method of weighted moments.

REFERENCES

American Society of Civil Engineers, 1992. *Design & Construction of Urban Stormwater Systems.* New York: ASCE.

Bhaiji, H., 2013. *Stormwater Management Study Country Residential Subdivision NE¼ 18-24-2-W5M County of Rockyview*, Calgary: Civil Engineering Solutions.

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Calgary (City of), 2017. *Field Manual for Erosion and Sedimentation Control.* Calgary: City of Calgary.

McMechan, P. et al., 2014. *Frequency Analysis Procedures for Stormwater Design Manual*, Calgary: AMEC.

Rocky View County, 2013. *Design Standards.* Rocky View County: Rocky View County.

Rossman, L. E. & Huber, W. C., 2016. *Storm Water Management Model Reference Manual Volume I – Hydrology (Revised)*, Cincinnati: United States Environmental Protection Agency.

Seeliger, D., 2016. *Springbank Master Drainage Plan*, Calgary: MPE Engineering Ltd..

Westhoff, D., 2004. *Drainage Strategies for Springbank*, Calgary: Westhoff Engineering Resouces Ltd..

FACTOR GEOTECHNICAL

DEEP FILLS REPORT

To:	Cody Dunn McKinley Masters	**Project Number:**	304-001
		Project Type:	Deep Fills Report
Re:	242253 Westbluff Road Rocky View County, AB	**Report Date:**	March 24, 2024

Dear Sir,

It is understood that a single-family home is to be constructed at the municipal address of 242253 Westbluff Road in Rocky View County and that backfill thicknesses of up to approximately 2.9 m are planned. As per the Rocky View County County Servicing Standards (RVCCSS), when constructed depth of fill exceeds 1.2 m, a deep fills report is required to provide general recommendations for different types of building foundations and compaction testing of fill.

Upon provision of the Development Permit, the geotechnical engineer of record (Factor Geotechnical Ltd.) must provide compaction testing services to ensure that backfill placement is compliant with the RVCCSS, industry standards, and the recommendations within this report.

DESKTOP REVIEW AND FOUNDATION TYPE

A geotechnical investigation and slope assessment by ParklandGeo “Geotechnical Slope Assessment, 242253 Westbluff Road” dated August 10, 2016 was provided to Factor Geotechnical Ltd. (Factor) for review. This report includes one borehole located near the residence’s proposed location that is expected to be representative of the local soil conditions.

As excavation has not yet begun, Factor has reviewed the above noted report, surficial geology maps, and nearby projects to determine the expected soil types at the project location. Based on said review, it is likely that glacial sediment overlying tertiary fluvial-channel sediment will be encountered. Sediments in this area are expected to consist of a layer of clay till overlying gravel.

FOUNDATION RECOMMENDATIONS

It is understood that the preferred foundation type for the subject structure are shallow footings. Based on the desktop review of the expected soil conditions, shallow footings are considered suitable for the proposed development. It is anticipated that fill up to approximately 2.4 m is required within the building footprint and that footings will be placed on native soils near the current grade elevation (or on structural fill).

SITE PREPARATION

The subgrade for all proposed buildings, roads, flatwork, and other structures must be stripped of all vegetation, organics, fill, topsoil, and construction debris prior to construction. Failure to provide a properly prepared subgrade may result in settlement, whether differential or excessive, that may negatively affect the building performance and serviceability of the proposed development. A properly prepared subgrade is defined below:

- Any construction debris is completely removed from the subgrade.
- Organic materials, vegetation, and any untested fill materials are not present in the subgrade.
- The subgrade has been inspected by Factor to verify that adequate subgrade support is available.
  - The entirety of the proposed footing areas should be cut neat to the bottom of footing elevation prior to inspection. Any areas not prepared to the satisfaction of Factor at the time of inspection will be subject to reinspection.
  - The subgrade in all proposed roadways or foundations shall be scarified to a minimum depth of 200 mm, moisture conditioned, and recompacted to 98% of the Standard Proctor Maximum Dry Density (SPMDD). If any additional fill is required, all placed fill (fill lifts not to exceed a thickness of 200 mm) shall be compacted to 98% of SPMDD.
  - The subgrade for paved areas is recommended to be proof-rolled under the supervision of a qualified geotechnical engineer prior to placement of the granular subbase materials. A proof roll is completed by slowly driving (4 to 6 km/hr) a fully loaded tandem axle dump truck/water truck with a rear axle load of no less than 8,200 kg over the prepared subgrade while the inspecting engineer observes deflections.
- The subgrade is not frozen at the time of foundation construction and will not freeze immediately before, during, or after foundation construction, for the lifetime of the structure. Methods to prevent freezing of the foundation subgrade include glycol lines with insulated tarps or heating and hoarding.
- Positive drainage is maintained away from the structure before, during, and after construction of the foundation.
- Areas of the subgrade that have been identified as soft, loose, excessively moist, or otherwise unsuitable for construction have been remediated under the direction of Factor (see Appendix A).
- Prior to fill placement, slopes in fill areas should be cut back to a maximum gradient of 5H:1V to minimize the potential for differential settlement.

SETTLEMENT COMMENTS

It is expected that the native soils in the project area will be normally consolidated and may be subject to further consolidation when loaded by the backfill and proposed structure. Settlements of this nature are typically minor and well tolerated. Should variations in soil type be noted in the native soils across the backfill footprint, additional analysis may be required to account for any differential settlements in the native soils.

Self weight settlements of backfill compacted to 98% of the material's SPMDD can be expected to be between 0.5% to 2.0% of the fill height, depending on the type of soil. Fine grained soils such as clays or silts will tend towards the higher end of the given range, whereas coarse grained soils such as gravels or sands will tend towards the lower. Further settlement due to loading of the compacted backfill will also occur, but is expected to be minor, should proper compaction procedures be followed.

Based on the anticipated 2.9 m of maximum fill thickness on the site, self-weight settlement of fine-grained soils compacted to 98% of SPMDD can be expected to be a maximum of 58 mm. Where coarse-grained soils or structural fill compacted to 98% SPMDD is used, settlement can be expected to be a maximum of 15 mm.

BACKFILL AND COMPACTION RECOMMENDATIONS

Backfill should be placed in lifts no larger than 300 mm before compaction, compacted to 98% of SPMDD with testing completed on each lift. Areas outside of roadways or foundations must be compacted to a minimum of 95% of SPMDD. Per RVCCSS, "Following development approval, all deep fill placement must have a record of compaction testing". Once compaction work has been completed, compaction reports and a summary of the work can be provided by Factor.

Should backfill and compaction activities take place during freezing temperatures, it is recommended that the backfill material used in deep fill areas (over 1.2 m thick) consists of coarse-grained soils such as 75 mm sandy gravel with less than 8% fines content. Coarse grained materials should still be protected from freezing but are less susceptible to frost heave than fine grained soils such as the clay materials expected to be present on site. If clay is used as backfill, careful monitoring of the soil temperature will be required in addition to compaction testing.

Backfill should be consistent throughout the fill areas and not contain cobbles over 150 mm in diameter. Backfill below any proposed structures must consist of structural fill, or a lag time will apply to construction of the structure's foundation elements. If structural fill is not proposed for fill below foundations, contact Factor for additional recommendations related to lag times.

CLOSURE

We trust that this document meets your present requirements. Should you have any questions or wish to discuss the contents of this letter, please contact the undersigned.

Yours truly,

PERMIT TO PRACTICE
FACTOR GEOTECHNICAL LTD.
RM SIGNATURE:
RM APEGA ID #: 134194
DATE: Mar. 24 2024
PERMIT NUMBER: P015247
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
JOSH CLARK
ID 134194
2024-03-24

Tyler Daigle, E.I.T.
Geotechnical EIT

Josh Clark, P.Eng.
Geotechnical Engineer

LIMITATIONS AND CONDITIONS

LIMITATIONS

This Report has been prepared in accordance with the applicable jurisdiction's generally accepted engineering practices. No other warranty, expressed or implied, is intended or made. The information provided within this report is for the sole benefit of the Client. No other party may use or rely on the Report without written consent from Factor.

The identification and classification of soil type and geological profiles are a professional opinion based on the information available at the time of the inspection or investigation. Soil is inherently variable, and the actual site conditions can vary significantly between the investigated locations. The parties relying upon this Report should be aware of this risk and the delivery of this Report is subject to the express condition that such risks are accepted by the parties relying upon this Report.

The information and recommendations within this Report are based on the information gathered from information provided to Factor. Factor is entitled to rely on the information and representations provided by the Client and is not required to verify the accuracy of such information or representations.

If a geotechnical letter of assurance, compliance, or sign-off is required for this project, the Client is required to notify Factor so that timely field reviews can be provided during construction. Field reviews will allow Factor to verify that recommended construction practices are followed, and site conditions are consistent with this report.

GENERAL DESIGN & CONSTRUCTION GUIDELINES

1. DEFINITIONS

"**General engineered fill**" is used in areas where moderate subgrade movement is tolerable by the grade-supported structures (asphalt or sidewalks). This material may consist of low to medium plastic inorganic clay or granular materials. Materials meeting the standards of "select engineered fill" or "structural engineered fill" would be considered acceptable for use as "general engineered fill"

"**Select engineered fill**" is used in areas where only minor subgrade movement is tolerable by the grade-supported structures (slab-on-grade or within the building footprint). This material may consist of clay or granular soils meeting the following specifications:

Clay:	Liquid Limit =	20 to 40%
	Plastic Limit =	10 to 20%
	Plasticity Index =	10 to 30%
Gravel:	Free of clay, loam, or other deleterious materials	
	Less than 10% of particles passing No. 200 sieve	
	"Structural engineered fill" would be considered acceptable	

"**Structural engineered fill**" is used in areas where the subgrade is used to support structural loads, such as under footings. This material may consist of clean, well-graded crushed aggregate, free of organics, coal, clay lumps, or fine soil particles. This material should have less than 10% of particles passing the No. 200 sieve and meet all specifications for the project's jurisdiction.

"**Landscape fill**" is used in areas where settlement can be tolerated such as berms or grassed areas. This material may consist of any locally available soils.

Standard Proctor Density (SPD) refers to the Standard Proctor Maximum Dry Density as determined by ASTM D698. Optimum moisture content is also defined in ASTM D698.

2. BACKFILL AND COMPACTION

All backfill must be free of frost, construction debris, and lumps must be broken down before placement. Any oversized particles exceeding 50% of the lift thickness must be removed. Backfill must not be placed over a frozen subgrade.

Backfill material used adjacent to grade beams, pile caps, basement walls, abutments, above footings, and below pavement sections should consist of "general engineered fill" materials.

Backfill material used within 500 mm of the final grade near foundation walls, grade beams, pile caps, and footings should be relatively impervious to reduce seepage into the subsoil against the structure. This material can consist of cohesive "general engineered fill" materials.

Backfill placement against structures should be delayed until the structure can sufficiently withstand the earth pressures resulting from placement and compaction. If any deflection of the structure is noted during compaction, the compaction equipment, lift thickness, and other factors should be evaluated by a geotechnical engineer prior to further backfilling activities. Only handheld compaction equipment is recommended within 1 m of the backside of retaining walls or basement walls. Where fill placement is required on both the front and back of the structure, both sides should be backfilled and compacted in such a way that the difference in fill elevation is no greater than 500 mm.

Adequate bonding is required between backfill lifts. Any desiccated layers must be scarified, moisture conditioned, recompacted to the specified density, and bonded to the following lift. Granular materials should be scarified approximately 75 mm, moisture conditions, and recompacted to allow for bonding.

3. COMPACTION AND MOISTURE CONDITIONING

The following general compaction guidelines should be considered the minimum requirements. The stricter of these recommendations or the project specifications shall be used.

“General engineered fill” and “select engineered fill” shall be compacted to a minimum of 98% of SPD in maximum 200 mm thick lifts. Cohesive materials should be compacted at 0 to 2% above their optimum moisture content, while granular materials should be compacted 0 to 2% below their optimum moisture content.

“Structural engineered fill” shall be compacted to a minimum of 100% of SPD in maximum 150 mm lifts at 0 to 2% below their optimum moisture content.

“Landscape fill” shall be compacted to a minimum of 90% of SPD in maximum 300 mm lifts.

4. DRAINAGE AND BEDDING MATERIALS

Gravel utilized for drainage or weeping tile bedding should be clean, free-draining gravel or crushed rock generally containing no more than 5% soil particles passing the No. 200 sieve.

Coarse sand conforming to the following grading limits shall be considered suitable for drainage, use in pipe bedding, and use within the pipe embedment zone:

Sieve Size	Coarse Sand
10 mm	100
5 mm	95 – 100
2.5 mm	80 – 100
1.25 mm	50 – 90
630 µm	25 - 65
315 µm	10 – 35
160 µm	2 - 10

Please refer to project specifications or jurisdiction for exact specifications.