

**PUBLIC HEARINGS AND MEETINGS
PLANNING AND DEVELOPMENT REPORT TO COUNCIL
SITE SPECIFIC AMENDMENT
November 12, 2025
To be heard at: 1:30 PM**

APPLICATION INFORMATION		File No. 25R054
	LEGAL DESCRIPTION: Ptn. SE 27-20-29 W4M; Plan 2210304, Block 8, Lot 18	
	LANDOWNER: Amy Dunham	
	AGENT: TimberCreek Homes Inc.	
	AREA OF SUBJECT LANDS: 0.8 acres	
	CURRENT LAND USE: Residential Community Sub-district 'A'	
PROPOSAL: Site Specific Amendment to Section 13.4.6.4 – <i>Utility Servicing Criteria</i> of the Residential Community District to allow for the existing non-compliant on-site wastewater holdings tanks to remain instead of installing the required tertiary treatment system on the subject parcel.		
DIVISION NO: 7		COUNCILLOR: R.D. McHugh
FILE MANAGER: Stacey Kotlar		

PREAMBLE:

The subject parcel is located within Phase 2B of the Green Haven Estates ASP, Council granted subdivision approval for this phase in 2017 allowing the creation of 23 x 0.8 acre Residential Community Sub-district 'A' (RCA) lots. All of the requirements were completed, and the subdivision was registered in 2022.

During the land use application for Phase 2B, the residential lots were designated as RCA to ensure that a development permit process would be undertaken on each lot to confirm that all required setbacks/building envelopes were met, and that all restrictions and recommendations as noted within the Stormwater Management plan, Lot Grading plan, High Water Table Testing and Septic Disposal analysis were undertaken in the building process, as well as ensuring that high efficiency tertiary wastewater treatment systems were installed.

A Development Permit application for the construction of a Single Family Dwelling with attached Oversized Garage on the subject parcel was submitted and conditionally approved on September 7, 2022. The Development Permit submission included all of the typical development permit application requirements, and this application also included the required stamped plot plan, executed building grade slip/form and a signed declaration of understanding for wastewater servicing to ensure that a tertiary/mechanical septic system is installed. To date, the conditions of the DP have not been finalized due to the installation of holding tanks rather than the required tertiary/mechanical septic system.

In September of 2024, a new Development Permit application was submitted for the subject parcel for a Personal Use Accessory Building and Lot Grading associated with the excavation and construction of an outdoor pool. Upon review of this application, the County was informed that 2 x 5000 gal on-site wastewater holdings tanks were installed instead of the required tertiary/mechanical treatment system. As such, the applicants have submitted a Site Specific Amendment for Councils consideration. This Development Permit is currently deemed as incomplete until the non-compliant wastewater system that was installed on the subject parcel is addressed.

In December 2024, the agent on behalf of the landowner applied for a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the Residential Community District of the Land Use Bylaw to allow for the existing non-compliant on-site wastewater holdings tanks to remain to service the subject property, instead of installing the required high efficiency tertiary treatment system on the subject parcel. This application was refused by Council on February 19th, 2025 for the following reasons:

In consideration of the Green Haven Estates Area Structure Plan and the previously approved servicing strategy, Council is of the opinion that the Site-Specific Amendment to the land use district, and existing non-compliant wastewater holding tanks do not meet the intent of Policy 4.9.1.5 of the Green Haven Estates ASP or the servicing strategy that was approved for these lands. Council requires that the landowner and builder bring the subject property into compliance with the Land Use Bylaw and restrictive covenants.

In July 2025, the agent, on behalf of the landowner, submitted a request to waive the six-month waiting period for reapplication, citing the availability of new supporting information. Two independent consulting firms had been engaged to prepare updated assessments of the on-site wastewater system, with the resulting formal reports to be submitted for the County's review as part of the revised application. This request was approved.

EXECUTIVE SUMMARY:

Proposal

Application proposing a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the RC District to allow for the existing non-compliant on-site wastewater holdings tanks to remain instead of installing the required tertiary treatment system on the subject parcel.

Location

The subject parcel is located within Phase 2B of the Green Haven Estates development and accessed from the internal subdivision road, Green Haven View. Green Haven Estates is located directly east and south of the Town of Okotoks and directly west of 48th Street East.

Policy Evaluation

The subject parcel has been reviewed within the terms of the Foothills County and Town of Okotoks Intermunicipal Development Plan, the Green Haven Estates Area Structure Plan and Land Use Bylaw 60/2014.

Referral Considerations

The application was circulated to all internal and external agencies.

The Public Works Department has reviewed the two new on-site wastewater evaluation reports prepared by D&S Enterprises and Township 27, as well as an independent third-party review of both. Public Works notes that D&S Enterprises has extensive experience and a strong professional reputation. The recommendations provided by D&S are further supported by Township 27, which also recommends retaining the existing holding tanks. In addition, the Township 27 report has been authenticated by a professional engineer.

PURPOSE OF APPLICATION:

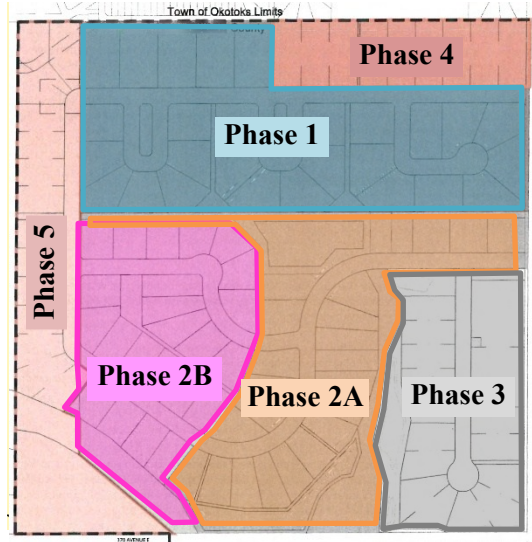
The applicants have applied for a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the RC District to allow for wastewater holding tanks instead of the required tertiary treatment system.

BACKGROUND:

The Green Haven Estates ASP was originally adopted in 2007, which included phases 1, 2 and 3, outlined in red. In 2023, Council granted first reading to Bylaw 41/2023 to adopt proposed amendments to the ASP, outlined by the red dashed lines, allowing for 2 new phases, referred to as Phases 4 & 5, this application has not yet been finalized.

In 2012, Council granted 1st reading to Bylaw 63/2012 authorizing the redesignation of the Phase 2 and 3 lands. At this time, the land use was redesignated to Hamlet Residential Sub-district “A” and the Utility Servicing Criteria for the subject lands was to be provided by communal water and individual on-site high efficiency septic systems.

Please note: In 2022, Council approved amendments to the Land Use Bylaw, including revising the name of the Hamlet Residential (HR) District to Residential Community (RC) District. This is the reason for the land use of the subject lands now being referred to as RC / Residential Community Sub-district “A” (RCA) instead of HR / Hamlet Residential Sub-district “A” (HRA).



Phase 1: Residential Community District parcels, registered in 2012. Communal water treatment and distribution facility was also established in Phase 1.

Phase 2A: Residential Community Sub-district ‘A’ parcels, registered in 2015.

Phase 2B: Residential Community Sub-district ‘A’ parcels, registered in 2022.

Phase 3: Residential Community Sub-district ‘A’ parcels, registered in 2025.

The residential lots within Phases 2 and 3 were designated as RCA to ensure that a development permit process would be undertaken on each lot to confirm that all required setbacks/building envelopes were met, and that all restrictions and recommendations as noted within the Stormwater Management plan, Lot Grading plan, High Water Table Testing and Septic Disposal analysis were undertaken in the building process, as well as ensuring that high efficiency tertiary wastewater treatment systems were installed.

Phase 4 and 5: Country Estates Residential Sub-District ‘A’ (CERA) parcels, Bylaw 42/2023 received 2nd and 3rd Reading July 2, 2025.

The new lots within Phases 4 and 5 will be designated as CERA to ensure that considerations, recommendations, and restrictions within Stormwater Management Plan, Comprehensive Site Drainage Plan, Lot Grading Plans, Building Envelopes and requirements for installation of high efficiency tertiary wastewater treatment systems and adherence to the 100 meter setback requirement of a wastewater system to a production water well are complied with.

SITE CONSIDERATIONS:

Access

The subject parcel is accessed from an internal subdivision road being Green Haven View that was constructed within a 25 m wide right-of-way and has a paved surface. This road was constructed as part of Green Haven, Phase 2B subdivision and was constructed to meet municipal standards. Public Works provided that some concerns with pump out tanks include additional heavy traffic on the road system.

Physiography

The subject parcel has generally flat to rolling terrain with an escarpment (in excess of 15%) that runs along the lands to the southwest, which is currently designated as Environmental Reserve.

Site Improvements

Existing Development on the parcel includes a residence with an attached garage, approved under Development Permit (22D 169). Excavation on the lot has been started to support the construction of an inground pool. The excavation of the site was stopped, and a DP was applied for in September of 2024 to allow for Lot Grading (in support pool excavation) and for the construction of a proposed +/- 480 sq. ft. pool house. The DP is currently deemed as incomplete until the non-compliant wastewater system that was installed on the subject parcel is addressed, which is the purpose of the initial and subsequent Site Specific Amendment application.

Servicing Criteria

The subject parcel is currently serviced by the piped Municipal Water and the existing non-compliant on-site wastewater holding tanks.

Wastewater in Green Haven Estates Phases 2 and 3 is to be provided via the installation of individual on site tertiary treatment / mechanical septic systems. Lots within Phase 2B (including the subject parcel) must meet the requirements of the Level 4 Assessment Report that was completed on August 12, 2019 by SD Consulting Group – Canada Inc. This assessment was required as a condition of subdivision for Phase 2B, it identifies two viable locations on each lot for the installation of the required tertiary treatment systems. As such, the applicants are requesting Councils consideration to allow for the existing holding tanks to remain instead of installing the required tertiary/mechanical treatment system.

Previously, the applicants have submitted an onsite wastewater evaluation report that was completed by Groundstar Contracting Ltd. This evaluation provides two suitable options for the subject parcel; installation of a CSA approved packaged treatment plant supplying a secondary treated effluent to a sand mound as tertiary treatment or CSA approved concrete holding tanks. The reports states that holding tanks have been chosen as a suitable on-site wastewater system due to the size of the property, soil types as well as the conditions of development. The evaluation further speaks to the calculations, area and setbacks that would be required for the installation of a CSA approved packaged treatment system. Further, the report identifies that due to the constraints of the drainage to the south and west sides of the proposed installation area, the risk of effluent breakout was of great concern and the minimum setback from the home could not be achieved. The onsite wastewater evaluation report and plot plan showing the measurements are attached as Appendix B

Public works provides that the Phase 2B Level 4 PSTS was completed as a design to follow during construction and is to guide the potential layout of the required PSTS area. If the contractor/building would have followed the PSTS there would have been space for the correct treatment system to be installed as well as space for a back up system in case of failure. The department has reviewed the onsite wastewater evaluation report and notes that the report was done post construction, excavation and soil disturbance of the rear yard; therefore, there was the potential for the correct treatment system to be installed however this may no longer an option due to the large excavation and disturbed soil at the back of the lot.

D&S Enterprises Wastewater Design was retained to provide an independent review of the lot, along with the septic holding tanks and to determine if there are any viable options for an onsite soil-based treatment system. This review is dated April 7, 2025 and is included in Appendix C. This report determined that the area of disturbed soils combined with the minimum required setbacks, leaves insufficient space for a soil-based treatment system that will meet the requirements of the Alberta Private Sewage System Standard of Practice 2021 (SOP) and the Level 4 PSTS. D&S Enterprises is of the opinion that with the information provided and reviews at the time of the investigation, the property in it is current state will not be conducive to installing a soil-based treatment system and is limited to holding tanks as the only viable option that would be SOP compliant.

Township 27 Inc were consulted to provide a third party review of system in place and history of the parcel dated May 20, 2025. This review recommended retaining the existing 2 holding tanks stating the reasons as the severely disturbed condition of the soils, insufficient area available for an adequate

Engineered fill solution, the proximity to the drainage swale at the southern edge of the proposed treatment mound where significant grades are present, and locational changes given the ROW's and the required setbacks for the PSTS and its associated treatment mound. This report is included as Appendix D.

REFERRAL CIRCULATION:

CIRCULATION REFERRALS	
REFEREE	COMMENTS
INTERNAL	
Public Works	Public Works provided the following comments: • A third party review was done on the supplied reports • D&S Enterprises have extensive experience and a solid reputation • Township 27 report is authenticated by a professional engineer • D&S recommendations are further supported by Township 27 recommending retaining the holding tanks • If a pump out system is accepted as the only alternative in this case, safety codes should confirm that the existing is compliant with the applicable code
EXTERNAL	
ATCO	No concerns
Fortis	No concerns
Telus	No concerns
PUBLIC	
Western Wheel	October 29 th and November 5 th , 2025
Landowners (half mile)	Notice of this application was mailed to area landowners within one-half mile of the subject parcel on January 29, 2025. No submission were received prior to completion of this report.

POLICY EVALUATION:

Land Use Bylaw 60/2014

The Hamlet Residential District (in 2012, at the time of land use redesignation approval) provided that the Utility Servicing Criteria is to be communal water and communal wastewater disposal systems however, Council approved an alternative servicing strategy that was proposed by the developer, being communal water and individual on-site high efficiency septic systems. The subject lands are currently designated as Residential Community Sub-district "A" (RCA), which provides the same Utility Servicing Criteria as noted above. The RC District is included in the report as Appendix F.

As such, the subject parcel does not align with the utility servicing that was approved as part of the land use application for Phases 2 and 3 of the Green Haven Estates ASP.

Green Haven Estates Area Structure Plan

The subject parcel does not generally align with the policy direction noted within the Green Haven Estates Area Structure Plan, specifically with respect to Policy 4.9.1.5 which provides that should a communal system not be feasible, the developer may install individual systems to the satisfaction of the County.

Foothills County and Town of Okotoks intermunicipal Development Plan

The subject parcel is located within the Foothills County and Town of Okotoks Intermunicipal plan area. The Town of Okotoks was circulated on this application, and they do not have any comments with respect to this application.

SUMMARY:

Bylaw XX/2025 - Application for a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the Residential Community District to allow for the existing non-compliant on-site wastewater holdings tanks to remain instead of installing the required tertiary treatment system on the subject parcel, being, Ptn. SE 27-20-29 W4M; Plan 2210304, Block 8, Lot 18.

OPTIONS FOR COUNCIL CONSIDERATION:

OPTION #1 – APPROVAL

Council may choose to grant 1st reading to the application for a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the Residential Community District to allow for the existing non-compliant on-site wastewater holdings tanks to remain instead of installing the required tertiary treatment system on the subject parcel, being, Ptn. SE 27-20-29 W4M; Plan 2210304, Block 8, Lot 18, subject to the following:

1. Final Site Specific Amendment application fees to be submitted;

OPTION #2 REFUSAL

Council may choose to refuse the application for a Site Specific Amendment to Section 13.4.6.4 – *Utility Servicing Criteria* of the Residential Community District to allow for the existing non-compliant on-site wastewater holdings tanks to remain instead of installing the required tertiary treatment system on the subject parcel, being, Ptn. SE 27-20-29 W4M; Plan 2210304, Block 8, Lot 18, for the following reasons:

In consideration of the Green Haven Estates Area Structure Plan and the previously approved servicing strategy, Council is of the opinion that the Site Specific Amendment to the land use district, and existing non-compliant wastewater holding tanks do not meet the intent of Policy 4.9.1.5 of the Green Haven Estates ASP or the servicing strategy that was approved for these lands.

APPENDICES:

APPENDIX A: MAP SET

- MAP 1 – LOCATION MAP
- MAP 2 – SITE PLAN
- MAP 3 – ORTHO PHOTO

APPENDIX B:

GROUNDSTAR CONTRACTING ONSITE WASTEWATER EVALUATION REPORT

APPENDIX C:

D&S ENTERPRISES RESIDENTIAL ONSITE WASTEWATER TREATMENT SYSTEM

APPENDIX D:

TOWNSHIP 27 INC. SITE REVIEW

APPENDIX E:

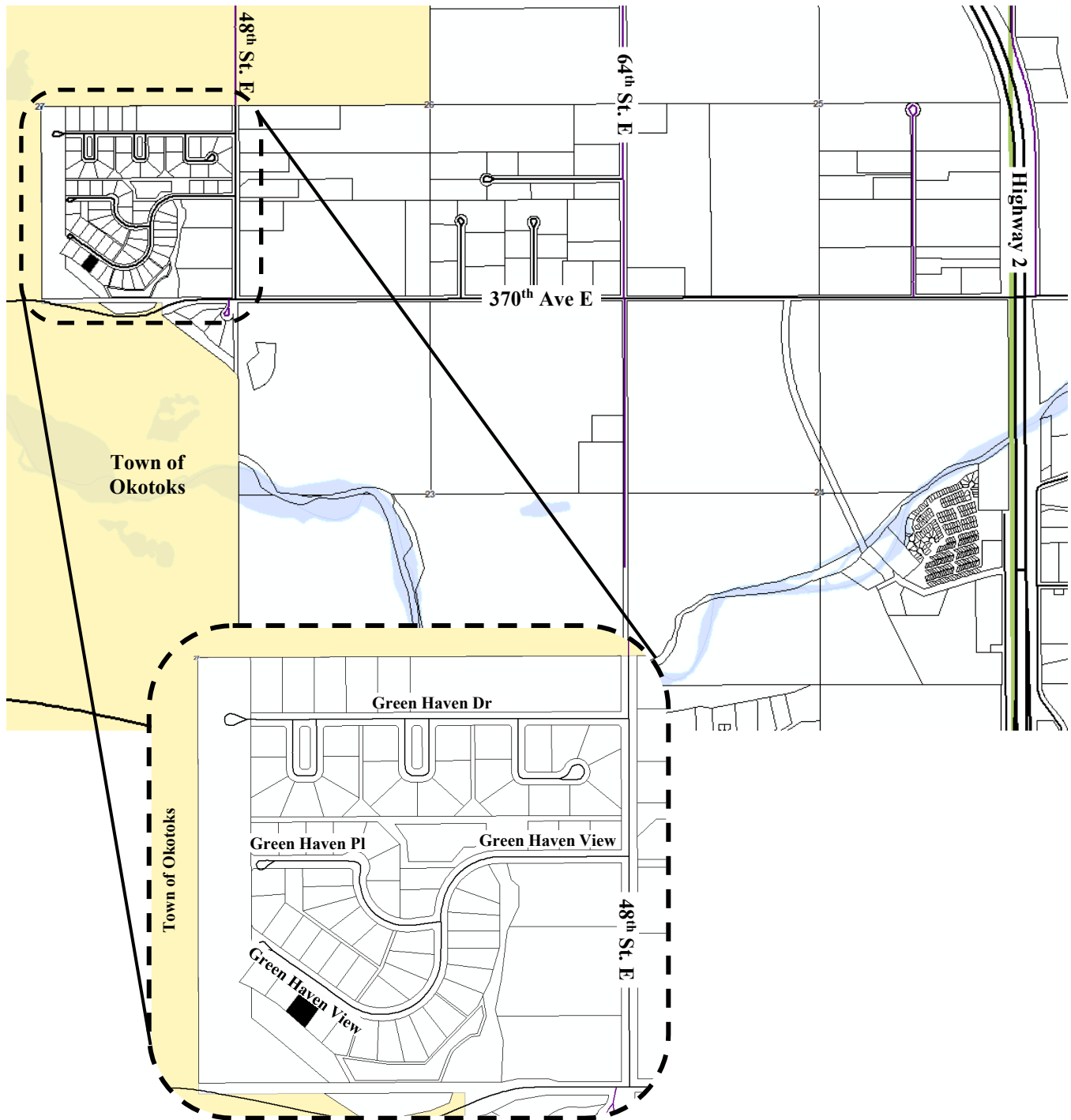
PROPOSED BYLAW

APPENDIX F:

RESIDENTIAL COMMUNITY DISTRICT

APPENDIX A:

MAP 1 – LOCATION MAP



[illegible]

MAP 3 – ORTHO PHOTO



GROUNDSTAR CONTRACTING ONSITE WASTEWATER EVALUATION REPORT



Onsite Wastewater Evaluation Report

Assessment completed by: Royce Neigum of Groundstar Contracting Ltd. PSDS #9609

Customer: Timber Creek Homes

Project Address: 574 Green Haven View

Project Details: Septic system suitability assessment

An evaluation of the above property was completed to assess the suitability of an onsite wastewater treatment system. Based on the size of the property and soil type, as well as the conditions of the development, holding tanks have been chosen as a suitable onsite wastewater system.

The proposed development served is a 2498 square foot 4 bedroom detached home. A preliminary fixture unit count was taken and an additional flow volume of 71.5 Imp Gal was added to design considerations. After initial review of the plans, we could assume this system is to be designed based on a peak daily flow of 521.5 Imp Gal. This development will require a higher than normal effluent treatment due to site constraints so a packaged treatment plant delivering effluent to a sand mound or concrete holding tanks would be suitable here. Calculations for sizing are provided below.

Option 1: The first option would be installation of a CSA approved packaged treatment plant supplying a secondary treated effluent to a sand mound as tertiary treatment for this development will consume an area of approximately 2,719.5 square feet. The sand layer will be 115 feet in length and 6.5 feet wide and covering approximately 751 square feet. The overall width of the completed sand mound will be 21 feet wide and 129.5 feet long. These measurements are calculated based on a Clay Loam soil type and applicable effluent loading rates related to this soil type.

Option 2: The second option for this development would be installation of CSA approved concrete holding tanks.

Wastewater Treatment Design Details

Option 1:

The calculations are below for this development with a packaged treatment plant delivering secondary treated effluent to a sand mound treatment area where effluent will be evenly disbursed via pressure distribution piping.

Treatment Mound Sizing Calculations

The soil type that exists below the sand mound area is Clay Loam with a secondary treated effluent loading rate of 0.45 Imp. Gal./Day/Square Foot. The development is assumed to have a peak daily wastewater flow volume of 521.5 Imp. Gal.

In Situ Soil Infiltration Area:

Required:	1158 Square Feet
Provided:	3318 Square Feet
Slope of area:	<1%
Total toe to toe mound width:	21(6.4m) Feet
Total toe to toe mound length:	157 (48.17m) Feet

Sand Layer Details:

Maximum wastewater flow volumes:	521.5 Imp. Gal.
Hydraulic linear loading rate:	3.7 Imp. Gal./Day/Linear Foot
Sand layer area provided:	628 Square Feet
Sand layer effluent loading rate:	0.83 Imp. Gal./Day/Square Foot
Sand layer width:	4.49 Feet
Sand layer length:	140 Feet

Required Separation Distances:

A packaged treatment plant shall not be located within:

- 10m (33ft) from a water course**
- 10m (33ft) from a water source or water well**
- 6m (20ft) from a property line**
- 1m (3.25ft) from a building**

Note: A packaged treatment plant may be located 1m (3.25ft) from property line if;

- a) It is equipped with odour control mechanisms**
- b) The development has peak flows of less than 5.7m³ per day**
- c) The wastewater strength does not exceed typical levels of residential effluent strength**

Treatment Mounds:

15m (50ft) from a water source

100m (330ft) from a licensed municipal water well

15m (50ft) from a water course, except as provided in Article 2.1.2.4

2.1.2.4.

Separation from Specific Surface Waters

1) The soil - based treatment component of an on -site wastewater treatment system shall be located not less than 90 m (300 ft.) from

the shore of a1

a) lake,

b) river,

c) stream, or

d) creek.

1Intent: Sentence (1) —The terms “lake,” “river,” “stream,” or “creek” are used

specifically to separate them from other types of water courses to which this article does not apply. The purpose is to cause the location of the soil -based treatment component to be far enough from the body of water that upon a failure of surfacing effluent the effluent will not quickly and directly flow into the body of water. Alternatively, as set out in Sentence (2), the soil-based treatment component can be positioned on the lot, away from the body of water and in a location that will make a failure more easily noticed and upon failure will create an immediate inconvenience for the owner. This should result in a faster repair of the system. To achieve the intent of Sentence (2) the building does not have to be directly between the system and body of water. A water - tight septic tank or similar water tight initial treatment component does not need to meet the requirements of this Article.

3m (10ft) from property line

10m (33ft) from a basement, cellar, or crawl space

10m (33ft) from a building that does not have a basement, cellar, or crawl space

3m (10ft) from a septic tank

Option 2:

Maximum daily flow:	521.5 Imp. Gal/Day
Average daily flow:	250 Imp. Gal/Day
Holding Tank Volume:	10,000 Imp Gal
Days of holding based on peak flow	19 Days
Days of holding based on average flow	40 Days

Holding tanks shall not be located within:

10m (33ft) from a water course

10m (33ft) from a water source or water well

6m (20ft) from a property line

1m (3.25ft) from a building

In closing, calculations were completed and measurements were done to fit the tertiary treatment system on this site. With the constraints of the drainage right of way to the South and the West side of the proposed installation area the maximum area was taken and the minimum area for setback from the home could not be achieved. The plot plan is attached to show measurements for reference. Also, with the system situated directly against the drainage swales to the South and the West the risk of effluent breakout was of great concern. If there was ever a failure within the system the effluent would escape directly into the drainage swale and potentially contaminate the downstream components leading to unknown environmental hazards. Although holding tanks are not ideal for the system owner this is the only design that would be able to serve this particular development. Two 5000 Imp. Gal tanks would serve this property with an approximate once a month pump out schedule.

D&S Enterprises Wastewater Design

**Residential Onsite Wastewater Treatment System (OWTS)
Timber Creek Homes/Amy Dunham
574 Green Haven View**



Date: April 7, 2025

Legal Description of Property:

SE ¼ Sec 27 Twp 20 Rge 29 W4M
Lot 18; Blk 8; Plan: 221 0304
574 Green Haven View – Green Haven Estates Phase 2B

To Whom It May Concern,

It is understood that Foothills County Council rejected a variance request for the home located at 574 Green Haven View, to continue using the septic holding tanks that were installed at the time of the home build. It is further understood that Council recommended that the applicant explore additional options for the septic treatment system, to bring the home into compliance with the applicable bylaws. D&S Enterprises was subsequently retained by TimberCreek Homes, to provide an independent review of the lot, along with the septic holding tanks that were installed and to determine if there are any viable options for an on-site soil-based treatment system.

D&S Enterprises reviewed all of the relevant background information provided including the Level 4 PSTS Document for Green Haven, building design information, along with the information contained in the Council agenda packet dated February 19, 2025. On March 5, 2025, at approximately 1:15pm, D&S Enterprises visited the site to view and evaluate the disturbed portions of the backyard and determine if there were any remaining areas of the yard that would be conducive to a soil-based treatment system. A portion of the backyard of the property was observed to have undergone extensive excavation for the future installation of a private swimming pool and the area surrounding the pool excavation was significantly disturbed by heavy equipment. The property currently appears to have 2-5000 Imperial Gallon holding tanks installed for collection of the wastewater from the home. There is a 12.0m overland drainage right of way on the south portion of the property and a 3.5m overland drainage right of way on the west portion of the property according to the supplied plot plans. It is understood that the overland drainage right of way cannot be used for a soil-based treatment component. The required setbacks for a soil-based treatment system were measured and it was determined that there was very limited space for a soil-based treatment system to be installed that would meet the minimum requirements of the Alberta Private Sewage Systems Standard of Practice 2021 (SOP) or the Level 4 PSTS that was completed for the Green Haven subdivision. Additionally, the finished grade plot plan for the lot indicated that the side yard will have a final slope ranging from 13.2% to 18.3%, in order to meet the requirements of the storm water management plan for the subdivision.

The Level IV Assessment Report for Green Haven Estates completed by SD Consulting Group, dated August 12, 2019, stated that Lots 8, 9, and 10 (Block 6) were “entirely covered with disturbed fill soils” and “these lots will require holding tanks for onsite wastewater management.” It would appear as though the only compliant option for the Green Haven subdivision would be a holding

D&S Enterprises Wastewater Design

tank, in the event that the soils have been disturbed and the lot was not conducive to an on-site soil-based treatment system. Soil-based treatment systems are all based upon soil structure, texture and depth to a restrictive condition as defined in the SOP. Heavy equipment used for excavation disturbs the soil structure and can cause compaction of the soils and often the area becomes unsuitable due to the inability to determine an infiltration loading rate on the soils as outlined in the SOP.

The excavation of the pool and surrounding area has created disturbance to the soil inventory that is problematic for a soil-based treatment system. Furthermore, filling the excavation in with any fill material potentially can cause a “bathtub” scenario. This means that the system may work initially however over time there is significant potential for the excavated area to fill up to the point that effluent surfaces and the system is deemed to have failed. Soils typically cannot be rehabilitated once they are disturbed, in regard to soil-based treatment systems. The projected peak daily flow volume from the home is approximately 3,137 liters per day and Silty Clay Loam textured soils with a Grade 2 Blocky structure (assumed from similar sites in the area) has a secondary treated soil effluent loading rate of 22L/m²/d. Based upon the projected peak daily flow volume from the residence at 574 Green Haven View and the assumed soils of Silty Clay Loam texture and Grade 2 blocky structure an area of approximately 290m² (approximately 150m² for the actual trenches and approximately 140m² for the minimum trench separation area). In D&S Enterprises’ opinion based on the information provided at this time, there is insufficient undisturbed area on the property to accommodate a soil-based treatment system and achieve all the required setback distances as per the SOP.

Required setbacks as per the SOP:

Packaged Sewage Treatment Plant / Pre-aeration Settling Tank

10m (33ft) water source or water well,
100m (330ft) from a licensed municipal water well,
10m (33ft) water course,
1m (3.25ft) a building, and
6m (20ft) property line.¹

¹(May be 1m (3.25ft) from property line if odour control mechanisms exist AND peak flow is less than 5.7m³ (1,250 Imp.Gal) AND effluent does not exceed typical strength wastewater.

Treatment Fields

15m (50ft) water source or water well,
100m (330ft) from a licensed municipal water well,
15m (50ft) water course, except as provided in Article 2.1.2.4.,²
1m (3.25ft) building w/ no foundation,
5m (17ft) building w/ foundation but no basement, crawl space or cellar,
10m (33ft) building w/ foundation w/ basement, crawl space or cellar,
5m (17ft) septic tank or packaged sewage treatment plant, and
1.5m (5ft) property line.

Treatment Mounds

15m (50ft) water source or water well,
100m (330ft) from a licensed municipal water well,

D&S Enterprises Wastewater Design

15m (50ft) water course except as provided in Article 2.1.2.4., ²
10m (33ft) a building,
3m (10ft) septic tank, and
3m (10ft) property line.

² The soil based treatment component of an on-site wastewater treatment system shall not be less than 90m (300 ft.) from the shore of a lake, river, stream or creek. The 90m (300 ft.) setback does not apply to watercourses or water bodies that are not a lake, river, stream or creek. And where a principal building or other development feature is situated between the soil-based treatment component and a lake, river, stream or creek, such that a failure of the system causing effluent on the ground surface will be obvious and create undesirable impact on the owner, the distance may be reduced to the minimum distance requirement set out in the SOP for the particular type of treatment system being used.

The area of disturbed soils combined with the minimum required setbacks, leaves insufficient space for a soil-based treatment system that will meet the requirements of the SOP and the Level 4 PSTS. When there is less than the required space for a soil-based treatment component a variance can be requested, for a deviation from the Alberta Private Sewage Systems Standard of Practice 2021 (SOP). This is not recommended for this home, as it could increase the likelihood of the system failing in the future. In summary, D&S Enterprises is of the opinion that with the information provided and reviewed at the time of the investigation, the property in its current state will not be conducive to installing a soil-based treatment system and is limited to holding tanks as the only viable option that would be SOP compliant.

If you have any questions or concerns, please feel free to contact me at the number below.

Regards,



Digitally signed by Daniel A. Morris
Date: 2025.04.07 13:53:05 -06'00'
Adobe Acrobat version:
2025.001.20435

Daniel Morris

Certified Onsite Wastewater Designer and Installer in the Province of Alberta PS 8518
Alberta Onsite Wastewater Management Association member in good standing since 2002
Alberta Onsite Wastewater Management Association Instructor for certified Private Sewage Installers Training Program (2007-present)
Private Sewage Working Group Member for Alberta Private Sewage Systems Standard of Practice 2015 Third Edition and 2021 Fourth Edition and currently a member of the Private Sewage Sub-Council for the proposed 2026 Fifth Edition

D&S Enterprises, High River, AB
403-652-0348

dswastewaterdesign@gmail.com

www.dswastewaterdesign.com

TOWNSHIP 27 INC. SITE REVIEW

Township 27 Inc.

20105 Township Rd. 274 Rocky View County, AB T4B 5A3
Ph: 403 830 1093

SITE REVIEW

Date: May 20, 2025

Project: 574 Green Haven View
Ptn. SE 27-20-29 W4M; Plan 2210304, Block 8, Lot 18

Client: Timber Creek Homes

Distribution: Mr. Jim Crawford, Mr. Blair Hann

Purpose:

The undersigned has been requested to review the history, pertinent documentation and facts relating to the sewer system at 574 Green Haven View, Foothills County and to provide a professional opinion as to potential installation of a compliant PSTS.

Background:

The subject parcel is located in Phase 2B of the Green Haven Estates ASP.

A conditional approval for the Development Permit Application for construction of a single family dwelling with oversized garage was provided on September 7, 2022. This application included a stamped plot plan, executed lot building/grading plan and a signed declaration of understanding for wastewater servicing to include a PSTS.

A tertiary septic system was not installed as per the recommendations of the August 2019 Level 4 PSTS report authored by SD Consulting Group – Canada Inc. (See Appendix A). Rather, a double holding tank system was installed by Groundstar Contracting Ltd. This system consisted of 2 each 5,000 Imp. Gallon holding tanks, with no packaged sewage treatment system.

In September 2024 a new Development Permit was submitted for the addition of a pool, pool house and other landscape improvements for the property. The new development permit is currently deemed incomplete until the matter of the septic system has been fully addressed.

Factors and Considerations:

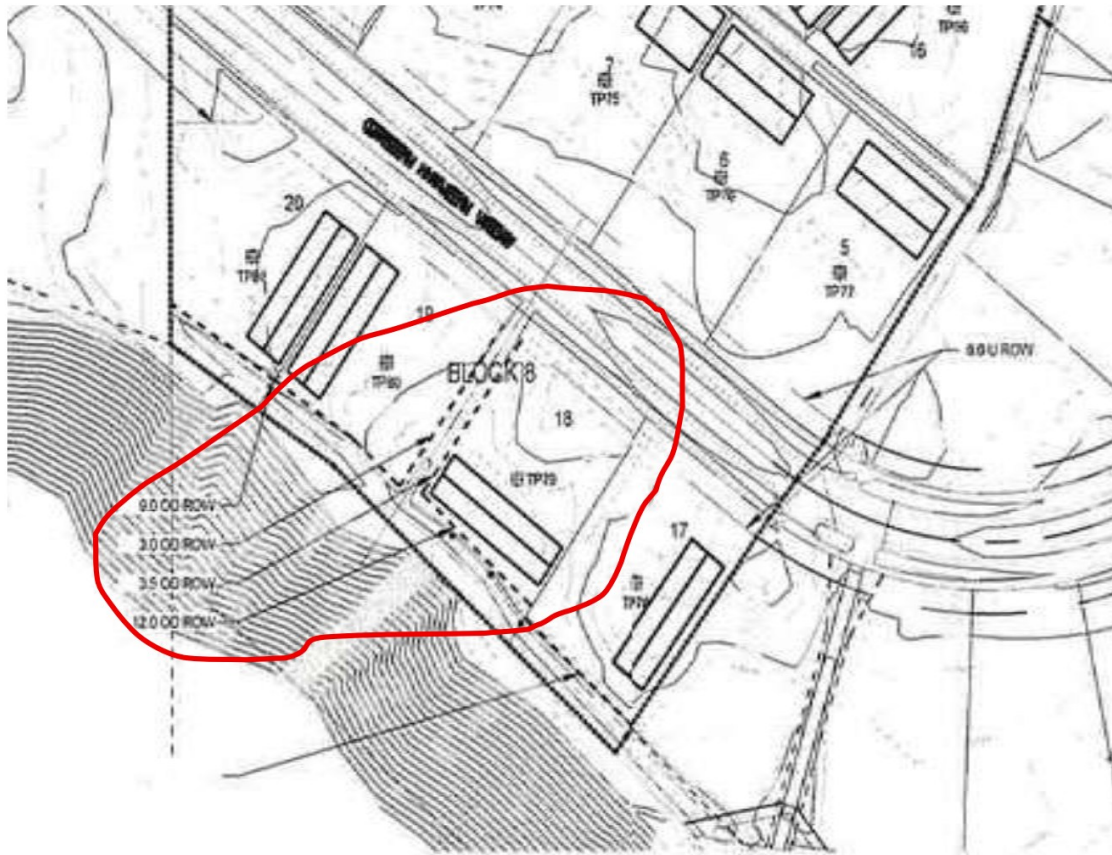
The Level 4 Assessment report identified above by SD Consulting Group provided analyses of the various soil conditions found in phase 2B and defined effective flow rates for calculation of required soil infiltration areas and sand layer areas within the treatment mounds. Along with this data, a plot plan of phase 2B was provided within this report identifying recommended areas within each lot where these treatment mounds could be located.

2 reports were issued for Phase 2:

The first report dealt with all lots except Block 6, Lots 8 to 10.

The second report dealt with Block 6, Lots 8 to 10. These lots were located in areas of fill and disturbed native soils.

Page 21 of the SD Consulting group report included the following area map, identifying potential PSTS locations for lot 18:



The proposed location for the PSTS was at the south edge of the property, in an east/west alignment. ROW's are identified along the west and south edges of the property to provide for subdivision drainage swales. As a result of these swales, there are significant slopes on the west side and rear yard grades along the boundaries of the proposed PSTS location.

Groundstar Contracting Ltd. prepared a report on their installation, included herewith as Appendix B.

Groundstar included area calculations for the required treatment mound size. We concur with Groundstar's calculations for a required PSTS treatment mound and clay loam classification of the soils.

Groundstar also included a copy of the lot plan, with dimensions regarding setback requirements for the PSTS and available sizes:



Given the calculated area requirements and the available areas for construction of this mound, it becomes apparent that locating a sufficiently sized mound would be problematic, given setback requirements and the steep slopes on the south and west periphery of the lot.

An independent review report was prepared by D&S Enterprises Wastewater Design, dated April 7, 2025, for this property. It is included herewith as Appendix C.

In general terms, the D&S Enterprises report corroborates the Groundstar design calculations for the required treatment mound size. We agree with both the D&S and Groundstar methodology and calculations for the size of required treatment mound.

The D&S report goes on to address the current existing site conditions and provides commentary regarding suitability of the existing soils for construction of a PSTS on the site.

Excavation has commenced for the proposed pool area, and the soils that presently exists have been both disturbed and mixed. This creates significant uncertainty in determining the consistency and content of available soils for the treatment system.

A solution has been suggested that would consist of providing an “Engineered fill” to the excavated area, then placing the treatment mound on top of this area. This solution is problematic from a number of standpoints:

- An “Engineered fill” solution can be designed to backfill the excavated area. However, “Engineered fill” only addresses the area filled. The interface between the fill area and existing soils is not addressed, effectively creating an boundary of dissimilar soils along the perimeter of the areas that are backfilled. The D&S Enterprises report identifies a “bathtub effect” risk for Engineered fill to the excavated area, whereby effluent can accumulate in the engineered fill areas, and build up to the point where itnt can overflow the filled area. There is a risk of this occurring with an Engineered fill solution for this property, given the extent of the disturbed soils at the site.
- The setbacks and inclusion of the ROW’s for the swales does not allow for enough area for an effective “Engineered fill” solution for this Lot.
- There are significant grades along the south edge of this lot to accommodate a drainage swale. These range from 16% to 30% along the edge of what would be the “Engineered fill” solution for the PSTS. These grades reduce the effective lateral soil support for this edge of the treatments area. With a lack of sufficient lateral support, surcharges of system effluent could create enough lateral force to “breakout” of the slope. To exacerbate this risk, the disturbed nature of the soils adjacent to the engineered fill area could create conditions whereby effluent follows through the dissimilar soils adjacent to the filled area. This would result in significant safety risk and ecological damage to the swale downstream of this lot, risks that would be deemed unacceptable.

There is insufficient area along the eastern edge of the property to accommodate sufficient PSTS treatment area given the required setbacks.

The level 4 report prepared by SD Consulting Group – Canada Inc. addressing Block 6, Lots 8 to 10 identifies disturbed soils on those lots. The findings by SD identify a potential solution for holding tanks being installed in lieu of a full PSTS for these lots. This would not be dissimilar to the conditions that presently exist at lot 18.

Recommendation and Conclusions:

We recommend retaining the existing 2 holding tanks. Our reasons for this recommendation are as described above and are summarized as follows:

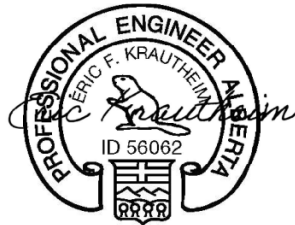
- The severely disturbed condition of the soils within the proposed PSTS location.
 - Insufficient area available for an adequate Engineered fill solution.
-

- The proximity of the drainage swale at the southern edge of the proposed treatment mound, where significant grades are present – see above.
- Locational challenges given the ROW's and the required setbacks for the PSTS and its associated treatment mound.

Our review, findings and recommendations are based on the documentation provided including:

- SD Consulting Group – Canada, Level 4 reports for Phase 2A
- D&S Enterprises Wastewater Design report dated April 7, 2025
- On Site Wastewater Evaluation Report by Groundstar Contracting Ltd.
- Schaeffer Andrew Ltd. Letter dated January 17, 2025 with Plot Plan
- Potion of Agenda Package – Council meeting Feb. 19, 2025
- Notice of Public hearing dated January 29, 2025

Best regards
TOWNSHIP 27 INC.




APEGA PERMIT#16807 MAY 20, 2025
Eric Krautheim, MMC., P.Eng.

Appendix A: SD Consulting Level 4 PSTS reports
Appendix B: Groundstar Contracting Ltd. Report
Appendix C: D&S Wastewater Design report dated April 7, 2025

PROPOSED BYLAW

BYLAW XX/2025

**BEING A BYLAW OF FOOTHILLS COUNTY TO AUTHORIZE AN AMENDMENT TO
THE LAND USE BYLAW NO. 60/2014 AS AMENDED**

WHEREAS pursuant to the provisions of the Municipal Government Act, Chapter M-26 Revised Statutes of Alberta 2000, and amendments thereto, the Council of Foothills County in the Province of Alberta, has adopted Land Use Bylaw No. 60/2014 and amendments thereto;

AND WHEREAS the Council has received an application to further amend the Land Use Bylaw by authorizing a Site-Specific Amendment to Section 13.4.6.4 – Utility Servicing Criteria of the Residential Community District land use rules to allow for the existing non-compliant on-site wastewater holding tank to remain instead of installing the required tertiary treatment system on Plan 2210304, Block 8, Lot 18; Ptn. SE 27-20-29 W4M.

NOW THEREFORE THE COUNCIL ENACTS AS FOLLOWS:

1. Under SECTION 13.4. RESIDENTIAL COMMUNITY DISTRICT, the following shall be added under Section 13.4.6.4 UTILITY SERVICING CRITERIA:

To allow for the existing non-compliant on-site wastewater holding tank to remain instead of installing the required tertiary treatment system on Plan 2210304, Block 8, Lot 18; Ptn. SE 27-20-29 W4M.

2. This Bylaw shall have effect on the date of its third reading and upon signing.

FIRST READING:

Reeve

CAO

SECOND READING:

Reeve

CAO

THIRD READING:

Reeve

CAO

PASSED IN OPEN COUNCIL assembled at the Town of High River in the Province of Alberta this day of 20 .

13.4 RESIDENTIAL COMMUNITY DISTRICT

RC

13.4.1 PURPOSE AND INTENT

To provide for municipally or communally serviced residential development located within Hamlet boundaries and/or in comprehensively planned developments outside of Hamlet boundaries, where supported by an adopted area structure plan and/or outline plan, consistent with the policies outlined in the Municipal Development Plan. This District was formerly named Hamlet Residential District and Residential District and includes all lands previously zoned as such in the County.

13.4.2 SUB-DISTRICT

13.4.2.1 Parcels may include the following sub-districts in cases where Council feels that there is a need. Not all parcels will be separated into sub-districts. Should a parcel include the sub-district, all district rules apply with the addition of the special provisions noted in accordance with the sub-district:

- a. Sub-district "A" is a designation added to the land use district indicating a requirement for special consideration on the development of the site and/or placement and construction of buildings or structures on the lands through approval of a development permit. Reference Section 2.4 of this Bylaw for more details on special provisions for parcels with sub-district "A".

13.4.3 GENERAL REQUIREMENTS:

- 13.4.3.1 Refer to Section 4.2 "No Development Permit Required" in the Land Use Bylaw for uses not requiring a development permit.
- 13.4.3.2 Refer to Section 9 and Section 10 respectively for the general and specific land use regulations and provisions that apply to this District.

13.4.4 PERMITTED USES	13.4.5 DISCRETIONARY USES
Accessory buildings not requiring a development permit Accessory uses Dwelling, Attached (where contemplated in an approved ASP) Dwelling single family Home office Public works Signs not requiring a development permit Solar Power System, Private (Not requiring a Development Permit) Temporary storage of one (1) recreational vehicle Utility services, minor	Accessory buildings requiring a development permit Antenna structures, private Bed and Breakfast Family Day Home Dwelling, Attached Dwelling, moved on Home based business Type I Home based business Type II Kennels, private Lot grading Manmade water bodies, private Secondary Suite, Principal Secondary Suite, Detached Signs requiring a development permit Solar Power System, Private requiring a Development Permit Temporary storage of up to 2 unoccupied recreation vehicles

13.4.6 LAND USE REQUIREMENTS

- 13.4.6.1 A person who wishes to subdivide land in this district into additional lots must first apply for and be granted approval of a land use bylaw amendment.
- 13.4.6.2 In order to facilitate the purpose and intent of this district and ensure the comprehensive development of Residential Community uses within the District, the following applies to applications for subdivision:
- a. Parcel Density:
 - i. Minimum 3 gross units per acre (3 gross upa);
 - ii. Maximum 10 gross units per acre (10 gross upa).
 - b. Minimum Parcel Size:
 - i. 464m² (0.11 acres);
 - ii. The area in title at the time of passage of this Bylaw.
 - c. Maximum Parcel size:
 - i. 0.32 ha (0.80 ac) unless the lot forms part of a condominium plan; or
 - ii. The area in title at the time of passage of this Bylaw.
- 13.4.6.3 Required Developable Area:
- a. In accordance with Section 9.8 of this Bylaw.
- 13.4.6.4 Utility Servicing Criteria
- a. Communal water and communal wastewater disposal systems;

13.4.7 DEVELOPMENT REQUIREMENTS

- 13.4.7.1 Maximum Lot Coverage:
- a. No building or group of buildings including their accessory buildings and impervious surfaces shall cover more than 50 percent of the lot area.
- 13.4.7.2 Maximum Dwelling Unit Density
- a. Maximum dwelling unit density for a parcel is one Dwelling, Single Family in accordance with Section 10.10, and one Dwelling, Secondary Suite in accordance with Section 10.26.
 - b. Or as determined by the Approving Authority in accordance with an approved Area Structure Plan or Outline Plan.
- 13.4.7.3 Minimum Yard Setbacks Requirements
- a. Front Yard Setbacks:
 - i. 40m (131.23 ft.) from the ultimate right of way or 70 meters from the centreline of a Provincial highway, whichever is greater;
 - ii. 64m (209.97 ft.) from the centreline of a Municipal Road, Major.
 - iii. 48m (157.48 ft) from the centreline of a Municipal road;
 - iv. 15m (49.21 ft) from internal subdivision road outside of a hamlet boundary;
 - v. 4m (13.12 ft) from the right of way of a municipal road or internal subdivision road located within a hamlet boundary.

- b. Side Yard Setbacks:
 - i. 1.5m (4.92 ft) from the property line.
 - ii. Notwithstanding sub-section 13.4.7.3 (b)(i), the side yard setbacks do not apply to the common wall side of a structure where a common wall exists
- c. Rear Yard Setbacks:
 - i. Principal Building – 8m (26.25 ft) from the property line;
 - ii. Accessory Building – 1m (3.28 ft.) from the property line; and
 - iii. Decks and associated staircases (steps) may project into the rear yard setback to a maximum of 1.5m (4.92 ft.);
- d. If the title to a lot is subject to a caveat in respect of a land dedication or an agreement for the acquisition of land for road widening purposes, the dedicated area or area of future road widening shall be considered the future property boundary for which setback distances set out shall apply.
- e. See Section 13.4.8 “Exceptions” for any setbacks exemptions that have been approved by Bylaw for particular developments.

See Section 9.27.9 through 9.27.12 for additional provisions regarding setbacks pertaining to parcels with two frontages.

13.4.7.4 Corner Parcel Restrictions:

- a. In accordance with Section 9.27.9 - 9.27.12.;

13.4.7.5 Other Minimum Setback Requirements:

- a. See Section 9.27 “Special Setback Requirements” of this bylaw for additional setback requirements that may apply.

13.4.7.6 Maximum Height of Structures:

- a. Principal buildings, first vehicle garage, and car ports:
 - i. 12m (39.37 ft.)
- b. Accessory Buildings:
 - i. 10.67m (35 ft.)
- c. Radio antennas, internet towers and wind turbines
 - i. 16m (52.49 ft.);

13.4.7.7 Minimum habitable area per dwelling

- i. 84 sq. m. (904.20 sq. ft.)

13.4.8 EXCEPTIONS:

- 13.4.8.1 Secondary Suites are not permitted on any lot with the hamlets of Heritage Pointe or Priddis Greens.

Heritage Pointe Development:

- 13.4.8.2 Front yard setbacks: 4m (13.12 ft.) from the property line adjacent to the internal road for all residential properties under the Heritage Pointe Area Structure Plan;

- 13.4.8.3 Rear yard setbacks: 3m (9.84 ft.) from the property line, only on those lots located on “Ravine Drive” in Heritage Pointe in accordance with Bylaw 805 including the CRR49 District amendments from 1986;
- 13.4.8.2.i Bareland Condominium Units on “Ravine Drive” in Heritage Pointe shall be no less than 3.048m (10 ft.) between buildings;
- 13.4.8.4 Front Yard setbacks: relaxation of up to 90% on front yard setbacks for corner lots for those properties under the Heritage Pointe Area Structure Plan;
- 13.4.8.5 Dwelling, attached is a Discretionary Use only on parcels along “Ravine Drive” in Heritage Pointe;
- 13.4.8.6 Rear yard setbacks: 1.5 meter encroachment into regular rear yard setbacks requirements for above grade decks; for those properties within Heritage Pointe Area Structure Plan area;
- 13.4.8.7 A garage up to 50% of the dwelling size (provided that the garage does not exceed a maximum of 2,400 sq. ft.) split into two different structures, either attached or detached from the residence is permitted on parcels that are located on lands within the Heritage Pointe Area Structure Plan.

See Section 13.4.8.1 - Secondary Suites are not permitted on any lot with the Hamlet of Heritage Pointe.

Heritage Pointe Stage 3 - Artesia Development:

- 13.4.8.8 Front yard setbacks: 4m (13.12 ft.) from the property line adjacent to the internal road; for those properties within the Heritage Pointe Stage 3 Area Structure Plan area - Artesia;
- 13.4.8.9 Side Yard setbacks: relaxation of up to 90% on side yard setbacks on corner lots provided the front yard is designated by the developer for those properties within Heritage Pointe Stage 3 Area Structure Plan area - Artesia;
- 13.4.8.10 Rear yard setbacks: 1.5m encroachment into regular rear yard setbacks requirements for above grade decks; for those properties within Heritage Pointe Stage 3 Area Structure Plan area - Artesia;
- 13.4.8.11 Maximum Height Requirement: relaxation of the maximum height requirements for all buildings to 12m within Heritage Pointe Stage 3 Area Structure Plan area - Artesia;
- 13.4.8.12 Dwelling, attached is a discretionary use on parcels along “Artesia Gate” “Spring Water Bay, and “Spring Water Close” in Heritage Pointe Stage 3 – Artesia
- 13.4.8.13 A garage up to 50% of the dwelling size (provided that the garage does not exceed a maximum of 2,400 sq. ft.) split into two different structures, either attached or detached from the residence is permitted on parcels that are located on lands within the Heritage Pointe Stage 3 – Artesia Area Structure Plan.

See Section 13.4.8.1 - Secondary Suites are not permitted on any lot with the Hamlet of Heritage Pointe which includes Artesia Development.

Greenhaven Development:

- 13.4.8.14 Front yard setbacks: 8m (26.25 ft.) from property line adjacent to 48th St. E; for those properties registered as Plan 1210671, Block 3, Lots 3 – 5;
- 13.4.8.15 Front yard setbacks: 4m (13.12 ft.) from the property line adjacent to Green Haven Drive and 100 Green Haven Court; for those properties registered as Plan 1210671, Block 3, Lots 3 – 5;

Foothills County Land Use Bylaw |

- 13.4.8.16 Front yard setbacks: 8m (26.25 ft.) from the property line adjacent to 48th St. E. to; for those properties included in Phase 2 & Phase 3 of the Green Haven Estates Area Structure Plan;
- 13.4.8.17 Front yard setbacks: 4m (13.12 ft.) from the property line adjacent to the internal road; for those properties registered in Phase 2 & Phase 3 of the Green Haven Estates Area Structure Plan;
- 13.4.8.18 Lots within Green Haven Estates may range in size from 0.81 acres (0.33 ha) to 2.54 acres (1.03 ha.), in accordance with the Green Haven Estates Area Structure Plan;

Priddis Greens Development:

- 13.4.8.19 Dwelling, attached is a Discretionary Use only on parcels Priddis Greens in SE 30-22-03-W5 consisting of the following plans:

Located on Sunset Way: Units 1 – 4 in the following plan numbers:

9010223, 8910127, 8910128, 8910356, 8910538, 8911028, 9010222, 9011301, 9011856, 9012391, 9110935, 9012392, 9011855, 9010650, 9010780, 89114631, 8910665.

Located on Sunrise Way: Units 1 – 4 in the following plan numbers:

8810478, 8811193, 8810198, 8711262, 8810237, 8810019, 8711609, 8810236, 8811193.

- 13.4.8.20 A garage up to 50% of the dwelling size (provided that the garage does not exceed a maximum of 2,400 sq. ft.) split into two different structures, either attached or detached from the residence is permitted on parcels that are located on lands within Priddis Greens.

See Section 13.4.8.1 - Secondary Suites are not permitted on any lot with the Hamlet of Priddis Greens.

Hawks Landing:

- 13.4.8.21 A garage up to 50% of the dwelling size (provided that the garage does not exceed a maximum of 2,400 sq. ft.) split into two different structures, either attached or detached from the residence is permitted on parcels that are located on lands within the Hawks Landing Area Structure Plan.
- 13.4.8.22 Setback: 8m (26.25 ft.) from the undeveloped road allowance right of way on the west side3 of the development located on Plan 0713569, Block 4, Lots 59-62 & Plan 0410490, Block 4, Lot 1

See Section 13.4.8.1 - Secondary Suites are not permitted on any lot with the Hamlet of Priddis Greens which includes the Hawks Landing development.

Cottonwood Development:

- 13.4.8.23 Dwelling, attached is a Discretionary Use only on parcels in S.E. 07-22-28-W4 along “Cottonwood Boulevard” in Cottonwood, consisting of Plan 0112316, Units 1-4, Plan 9212354, Units 1-4, and Plan 9410836, Units 1-4.

Hamlet of Naphtha

- 13.4.8.24 Front yard setbacks on lots within the boundaries of the Hamlet of Naphtha are reduced to 15m from the right of way of Highway #22.