



March 1, 2017

**City File: RV16-11
MD File: PL20150024**

Department of Planning and Development
Rocky View County
911 – 32nd Avenue NE
Calgary, Alberta T2E 6X6

Attention: Stefan Kunz

SUBJECT: PL20150024 To adopt the Glenbow Ranch Area Structure Plan in accordance with Section 633 of the Municipal Government Act. 2nd Draft Agency Circulation – January 26, 2017.

Dear Mr. Kunz,

The City of Calgary Administration has reviewed the updated Draft Glenbow Ranch Area Structure Plan, dated January 26, 2017, in reference to the *Rocky View County/City of Calgary Intermunicipal Development Plan (IDP)* and other applicable policies. We have also considered the previous response by Rocky View County.

In addition to the administrative review, the Draft Glenbow Ranch Area Structure Plan is the subject of a Report before The City of Calgary Intergovernmental Affairs Committee on March 2nd. Further comments and a formal position of Calgary City Council are expected to be provided after that date.

The City of Calgary is still of the opinion that the proposed Glenbow Ranch ASP will have a detrimental impact on the City of Calgary. At this time City of Calgary Administration requests that the Draft Glenbow Ranch Area Structure Plan not proceed to the approval process until the concerns of this letter and appendices have been resolved in a manner that recognizes the importance of the plan area to the citizens of our region.

We have detailed our concerns in relation to the detrimental impact in an updated Appendix I. Please note that concerns related to water, wastewater, stormwater, and watershed protection are now contained in Appendix II.

Administration would like to highlight the following concerns:

1. Due to the large residential component, limited employment land uses, and the vicinity of the plan area to The City of Calgary it is believed that there will be a detrimental impact and financial implications to The City of Calgary. The Glenbow Ranch ASP area is very different from the small towns and the cities that are located in close vicinity to Calgary. Those communities have stated goals to diversify their land use mix and provide a mix of housing and employment for local residents. The proposed community envisioned at Glenbow Ranch is planned from its inception as primarily single use residential development without the full complement of uses that would make a complete community. This is a very different form than contemplated by our urban municipal neighbours. The City of Calgary therefore requests further examination of the impacts on City of Calgary services as it is imperative to understand the potential impacts to reduce the financial implications to The City of Calgary prior to development.
2. The City is also concerned with the introduction of yet another significant settlement area in our metropolitan region. The approval of this plan is problematic in the context of Provincial efforts to introduce a Growth Management Board and Growth Plan for our region. The cumulative impact of scattered settlement areas as envisioned in the Glenbow Ranch ASP is a concern to long term sustainability of our region and should be informed by an overarching approach to regional sustainability as envisioned through the soon to be established Calgary Metropolitan Region Board. The concentration of over 15,000 people at this location will further dilute needed public infrastructure investment across the entire region (for example this area will likely prompt the need additional interchanges on Highway 1A) and increases the possibility of an inefficient delivery of public services which does not serve the long range interests of rate payers therefore causing a detrimental impact to The City of Calgary.
3. The City of Calgary remains significantly concerned with respect to potential source water quality detrimental source water quality impacts from the development proposed and the engagement that has occurred to date with Water Resources. The Bearspaw Reservoir, one of Calgary's two water supply sources, provides drinking water for more than half a million residents of Calgary and neighbouring communities. It is imperative from The City of Calgary's perspective that any adjacent land development near the Bearspaw Reservoir with potential to impact this source water supply be planned for and appropriately developed to ensure protection of the watershed. While engagement to date has occurred, The City of Calgary requests that this continue given the importance of ensuring source water protection occurs.
4. The City of Calgary has significant concerns regarding transportation and transit. The identified need for signalized intersections along Highway 1A is expected to significantly inhibit goods movement throughout our region while increasing travel time for the general public. While a preliminary meeting between Alberta Transportation, The City of Calgary, Town of Cochrane, and Rocky View County occurred in December 2017 and anticipated follow-up meeting has not yet been scheduled. With respect to transit, we are concerned. We are also concerned that the proposed plan will have a detrimental

impact on The City's transit system. The current plan is inadequate in its consideration of regional transit both through the plan area and to the plan area thereby causing a detrimental impact on The City of Calgary.

5. It continues to appear that the consideration of efficient regional transit service has been minimal. Overall the Glenbow Ranch ASP has given little consideration to multi modal travel and efficient regional transit service that could be introduced, in the future, between Cochrane and Calgary. It is a concern that the location of this concentrated settlement area will likely reduce efficient regional transit connections between Cochrane and Calgary in the long term thereby causing a detrimental impact on Calgary.
6. The City of Calgary remains concerned that the effective implementation of a Transfer of Development Credits (TDC) program may not occur. There is significant uncertainty within the plan, until the Government of Alberta has approved the TDC program. While a TDC development concept may be positive for watershed and environmental values, the risks of not following through on the TDC/Conservation Design policies are still very real, which could potentially undermine the goals of the plan thereby causing a detrimental impact on The City of Calgary.

A detailed list of our concerns, comments, and requests to date can be found in the updated Appendices I and II attached to this letter. Thank you for the opportunity to review and comment on this draft area structure plan and related documentation.

As previously noted further comments to this letter are anticipated upon discussion by Calgary City Council.

Please feel free to contact me at the number below if you have any questions or concerns regarding the above comments.

Sincerely,



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CC: Devery Corbin, Manager, Intergovernmental & Corporate Strategy

- Updated comments are located in the far right column and new comments are located at the end of this list and titled “Add.”
- Comments relating to water, wastewater, stormwater, and watershed protection are contained in Appendix II

#	Topic	Document	Comment and Potential Detriment – Jul. 25, 2016	Comment and Potential Detriment – Jan. 26, 2017
1	Planning	Area Structure Plan	The City is concerned with the introduction of another significant settlement area in our metropolitan region. The approval of this plan is problematic in the context of Provincial efforts to introduce a Growth Management Board and Growth Plan for our region. The cumulative impact of scattered settlement areas as envisioned in the Glenbow Ranch ASP is a concern to long term sustainability of our region and requires additional investigation. The concentration of over 14,000 people at this location will likely further dilute needed public infrastructure investment across our region (for example this area will likely prompt the need for additional interchange) and increases the possibility of an inefficient delivery of public services.	Concern remains. Implications of the proposed development intensity will impact the City of Calgary as noted in Comment # 88, 89, 90; further, the ASP does not provide any specific information about how a future regional transit service can fit in with the plan, of which will be detrimental to The City of Calgary.
2	Service Delivery	Area Structure Plan	The City Administration requests to explore with you the impacts to the range of City of Calgary services, from recreation to transit. Due to the large residential component, limited employment land uses, and the vicinity of the plan area to The City of Calgary it is imperative we take this opportunity to explore potential impacts and reduce the financial burden to the corporation of The City of Calgary.	Concern remains.
3	Transportation	Network Analysis	The City of Calgary requests analysis of impacts of additional through traffic on Bow Valley Trail (Highway 1A) & 12 Mile Coulee.	Additional materials were reviewed and suggest that at least one of the proposed at grade intersections will fail in the longer term if the plan area fully develops, and will require upgrading to an

				interchange; note that it is undesirable to have interchanges along a route with traffic signals interspersed (for example if 12 Mile Coulee and Lochend Road require interchanges, a traffic signal at Bearspaw Road would be undesirable. The City of Calgary Transportation department remains concerned that Map 9 gives the wrong impression without additional references to potential interchanges, and that City of Calgary infrastructure could be detrimentally impacted by traffic needs immediately to the west.
4	Transportation	Network Analysis	The City of Calgary requests to see SimTraffic simulation for all intersections, especially at Lochend Road and Range Road 33 to get a better indication of predicted operation.	Refer to above comment.
5	Transportation	Network Analysis	The City of Calgary requests that capacity analysis for AM peak hour be provided.	Refer to Comment #6.
6	Transportation	Network Analysis	Figures showing forecast volumes are not labeled for time period or duration.	Refer to Comment #6.
7	Transportation	Network Analysis	Please clarify whether City of Calgary Forecasting Data used in the development of this forecast included or excluded development of the Haskayne Area Structure Plan.	Refer to Comment #6.
8	Transportation	Network Analysis	The density proposed for Development Cell G exceeds the capacity for the 3 access points and either additional intersection mitigation (ie a grade separation) or lower development density is required.	Refer to Comment #6.
9	Transportation	Network Analysis	Trip generation for Cell G appears to account for residential trips only; the ASP indicates that services	Refer to Comment #6.

			will be allowed in this area, which will generate trips into the cell from other adjacent cells and outside of the ASP area, therefore actual trip generation may be higher.	
10	Transportation	Network Analysis	The capacity analysis for the intersection of Range Road 33 & Bow Valley Trail indicates that the intersection will break down in the ultimate horizon; although the capacity analysis indicates v/c ratios less than 1.0, the predicted queue length for the westbound left turn is 182 m, but only 55 m of left turn storage for each of the 2 left turn lanes is proposed; this will affect the westbound through movement including regional trips to and from Calgary.	Refer to Comment #6.
11	Transportation	Network Analysis	Analysis provided for Bow Valley Trail & Lochend Road shows v/c's of 1.29 for the southbound approach & 1.32 for the westbound through movement.	Refer to Comment #6.
12	Transportation	Area Structure Plan	At maximum bonus density, Range Road 33 and Lochend Road intersections fail; an interchange for one of these should be explored.	Refer to Comment #6.
13	Transportation	Area Structure Plan	Page 19.7, b. , edit to add: "...along 12 Mile Coulee Road, for the conversion of the intersection of Highway 1A & 12 Mile Coulee Road to an interchange, and for any other major capital infrastructure improvements determined to be required."	Refer to Comment # 88, 89, 90.
14	Transit	Area Structure Plan	The density proposed and units per acre in the ASP are not conducive to an efficient regional transit service. If regional service were to be introduced from Cochrane to Calgary and vice versa, there	No meaningful references to regional public transit; this does not reflect the long term nature of the plan. Concern remains.

			would be disincentive to travel through the development as it would penalize a larger number of customers from Cochrane. Working with Alberta Transportation and a future regional transit service provider, we could explore a stop on Highway 1A with associated amenities.	
15	Transit	Area Structure Plan	The mention of regional transit appears to be trivial; there is no mention of transit in the Transportation Analysis. It appears that all of the auto trips would funnel on to the highway and either into Cochrane/Calgary.	No meaningful references to regional public transit; this does not reflect the long term nature of the plan. Concern remains.
16	Transit	Area Structure Plan	Has Alberta Transportation endorsed any of the proposed signalized intersections of stop controlled intersection on Highway 1A?	Refer to Comment # 88, 89, 90.
17	Parks and Open Space	Area Structure Plan	Page 58: include "facilitate opportunities for trail connections into the Haskayne Legacy Park" This park will be located at the northern end of the City's Haskayne ASP, adjacent to the proposed Conservation Area.	Request generally satisfied.
18	Parks and Open Space	Area Structure Plan	Page 58: include "Development adjacent to the Haskayne Legacy Park shall be coordinated between Rocky View County and the City of Calgary.	Request satisfied.
19	Parks and Open Space	Area Structure Plan	Page 76: Include "Stormwater servicing and site drainage in the Plan area must ensure that there are no negative impacts to the Haskayne Legacy Park."	Request satisfied.
Add. 20	Parks and Open Space	Area Structure Plan		Page 15: There are 2 references to "Haskayne Park Area Structure Plan"; the correct plan title of the plan is "Haskayne Area Structure Plan".
Add.	Parks and Open Space	Area Structure Plan		There are numerous references to "Haskayne Park" throughout the document; the correct park name is

21				“Haskayne Legacy Park” .
Add. 22	Transportation	Area Structure Plan/ Network Analysis		The September 16, 2016 letter from Alberta Transportation to Rocky View County states “A high standard and continuous local road system should be established between the Town of Cochrane and the City of Calgary to reduce reliance on Highway 1A for short destination trips.” Satisfying this comment would have direct impacts to the City of Calgary as Calgary would have to update transportation plans to establish a new connection into the City of Calgary road network and City policy would require a public process for such an update (note that in a December 8, 2016 meeting, the City requested further clarification about this requirement from Alberta Transportation however no follow up information has been received to date).
Add. 23	Transportation	Area Structure Plan/ Network Analysis		The September 16, 2016 letter from Alberta Transportation to Rocky View County also states that “The department will be conducting a Functional Planning Study for Highway 1A in the future to confirm the ultimate standard of Highway 1A.” Prior to the completion of this study, assumptions about lane configurations and traffic control for intersections along Highway 1A are subject to revision following the Alberta Transportation study. Recommend adding reference to the future study by Alberta Transportation to the ASP, plus an action item to update the ASP following completion of the Functional Plan.
Add. 24	Transportation	Area Structure Plan		Page 73 – Map 9 Transportation: following review of the Network analysis and further analysis provided, it is the professional opinion of The City of

				Calgary Transportation staff that some of the Signalized Intersection locations shown may require interchanges to accommodate full build out of the plan area and the plan does not indicate the potential for future interchanges, therefore is misleading to readers; if interchanges are required in future but are not funded, goods movement, potential future transit movement and other traffic to/from Calgary from the northwest would be detrimentally impacted.
Add. 25	Emergency Services	Area Structure Plan		Policy 18.1 references adjacent municipalities as emergency service providers to adequately service the current and future needs of the ASP, which will be detrimental to The City of Calgary. Administration is not aware of any discussions or agreements in place regarding the current and future provision of emergency services to the Glenbow Ranch ASP area from The City of Calgary.

Comment Number	Document	Document Section	Comment and Potential Detriment
1	Area Structure Plan	General	In summary, The City of Calgary remains concerned with the potential detrimental impacts the proposed development may have on our source water. Source water protection is our first line of defence in providing clean, safe drinking water to over 1.2 million people currently in the region. Wastewater and stormwater impacts from this type of development are likely to have detrimental impacts on our raw source water quality. Possible commercial uses (e.g., gas stations, dry cleaners, large commercial areas) in the hamlet node may also introduce contaminants (e.g., organics, hydrocarbons, etc.) currently untreatable by our water treatment infrastructure, either on a chronic/low level or acute/spill basis. Water quality impacts from construction and maintenance generated by a development of this scale remain a concern. <i>“To support planned and logical development that can be adequately serviced with water and wastewater, and manages stormwater in a way that maintains or enhances Bow River water quality.”</i> At a regional scale, the nodal moderate density / higher density development proposed may be better suited to existing urban municipalities suitably equipped to deal with the degree of density proposed. Water, wastewater, and stormwater servicing all pose unique challenges in this area. It may prove challenging to manage stormwater of the development to “maintain or enhance” Bow River water quality – The City of Calgary believes there will be detrimental impact and, as such, the goal as stated is virtually impossible which may make the inclusion of such a goal misleading. <i>Transfer of Development Credits / Conservation Design policies (Pages 25-42):</i> The City of Calgary remains concerned that the effective implementation of a Transfer of Development Credits (TDC) program may not occur. While a TDC development concept may be more positive for watershed and environmental values than more traditional country residential development schemes, the risks of not following through on the TDC/Conservation Design policies are still very real, which could potentially undermine a significant number of the goals of the plan.
2	Area Structure Plan	Goal 8, Page 24	
3	Area Structure Plan	Pages 25 – 42	

			Location of Build Areas vs. Conservation Areas: The City of Calgary still has concerns that the optimization modelling of Build Areas vs. Conservation Areas seems to be based primarily on wildlife connectivity values. Although these coincide in many places with watershed protection values, criteria specific to watershed protection were not used as criteria to optimize the distribution of the Conservation Areas. Factors such as soil erodibility, soil suitability for septic/wastewater treatment, ephemeral + intermittent streams and overland flow pathways, and proximity/travel time to City of Calgary source water intake in Bearspaw should be considered in addition to general environmental and wildlife values. The City of Calgary believes a more fulsome exploration of such conditions may result in a different distribution of development, including less development and more conservation within Cells I, H, and J which are closer to discharging stormwater or wastewater into the Bearspaw Reservoir.
4	Area Structure Plan	Figure 7.2	Proposed Water System: As noted in previous comments from The City of Calgary, the 300 mm water mains are all located at the top of the steep valley slopes, and often cross the “Conservation Area”, which may lead to impacts to those areas during construction. Since water mains leak, sometimes substantially over time, this may create a risk of saturating soils leading to erosion and slope failures, and potential future detrimental impacts if water mains require servicing or repairs in the future. The City of Calgary suggests that water mains should be located away from slopes and under arterial roads instead for the purpose of protecting Calgary’s source watershed and the integrity of the Conservation Areas.
5	Area Structure Plan	21.6	Stormwater. Objectives: “Ensure the design of stormwater systems in TDC Build Areas G, I, and J address subsurface connections to the Bearspaw Reservoir” The updated draft ASP fails to offer any additional clarification or justification to better understand subsurface connections and it remains unclear why only areas G, I and J were selected for this objective, as opposed to all ten (10) areas (areas A to J).
6	Area Structure Plan	21	Concern with the objectives: Source control practices application endorsement in the ASP has not identified consideration for hydrogeological investigation: The LID and BMPs may or may not include considerations for water infiltration to meet volume control targets. Please make it clear what are you aiming to achieve with LIDs/BMPs. Is it driven by water quality enhancement or by volume targets? If infiltration is considered for volume control, then hydrogeological investigation should be clearly

			identified as a supporting study; and if not, clearly state that the LID/BMPs are not targeting volume infiltration, unless the proposed practices were capable of treating the runoff to satisfactory levels. We strongly suggest that satisfactory levels and methodology used to achieve them are closely discussed and agreed upon with The City of Calgary's Water Resources department.
7	Area Structure Plan	21	Concern with the objectives: As noted throughout our comments, The City of Calgary still believes water quality considerations of source water protection have not been adequately addressed. Subsequent comments below identify in more detail these concerns. Given the complexity of topography and sensitivity of source water in the area, The City of Calgary proposes that the stormwater management system should not be limited to operate only on a gravity basis, if pumping solutions are better able to achieve optimal storm servicing. Please clarify the extent to which the drainage catchments will accommodate adjacent transportation networks. Please consider clarifying the wording of this policy – it remains unclear the hierarchy of plans outlined. Please consider including a reference to The City of Calgary's Source Water Assessment and Risk Characterization (SWARC), October 2016. As noted previously, are ponds proposed for the Build Area different from the ones proposed in the Conservation Area? If so, please elaborate on how and why. The most recent version of the Master Drainage Plan has been updated to address many of our previous comments. It appears some sections have not been updated with all of these revisions, leading to some inconsistencies throughout the document. In particular, The City of Calgary requests more clarity as to the proposal use of LID features to infiltrate stormwater into native soils. This remains a concern to The City of Calgary as we are concerned that the use of stormwater infiltration into native soils may lead to unintended source water impacts.
8	Area Structure Plan	21.20(a)	
9	Area Structure Plan	21.20(b)	
10	Area Structure Plan	21.22	
11	Area Structure Plan	25.11(a)	
12	Area Structure Plan	Map 12	
13	Master Drainage Plan	General	
14	Master Drainage Plan	E2.1	4th Bullet - Targets have been identified elsewhere in the document. Please update this section to reflect the changes elsewhere.
15	Master Drainage	3.5	Methodology

	Plan		4th Bullet – <i>“For the selected scenario, the upstream stormwater management facility release rates were modified to achieve existing velocity properties.”</i> Besides velocity, how is the shear stress of additional volume from geomorphological point of view incorporated in the ESC evaluation? How would this reflect on the Section 5.3.3 – Scenario 3 – Velocity with Regional Facilities? Our previous comments have not been addressed. As discussed at a meeting with The City of Calgary Water Resources department on November 18, 2016, it is our expectation that a flow-duration analysis will be conducted and incorporated into the MDP. The flow-duration analysis is critical to understand and sustain existing natural systems. Alternatively, erosion control measures could be incorporated (which would require capital and ongoing maintenance costs).
16	Master Drainage Plan	3.5	7th Bullet – <i>“Regional facilities were sized as wetlands to achieve City of Calgary source control measures.”</i> Our previous comments have not been addressed. This item was discussed during a meeting with The City of Calgary Water Resources department on November 18, 2016. Typically, removing hydrocarbons and total suspended solids (TSS) along with constituents attached to the TSS particles is sufficient as it meets the Alberta Environment and Parks (AEP) objectives and guidelines for protection of aquatic life in rivers. However, for Glenbow ranch lands additional objective has to be considered – the source water protection. This expands the environmental concern to human health and public welfare. Impacting source water quality has a direct detrimental impact on the operational costs and even capital costs exerted to the Bearspaw Water Treatment Plant (BP WTP) in order to achieve the high water quality standards for drinking water, and the transmission and distribution network conditions. The proximity of the proposed urban development, the change in loadings and concentration of contaminants that it generates and introduces to source water are very concern for the BP WTP operation. Wetlands can provide good TSS removal and could potentially remove phosphorous to some extent, if designed and maintained properly. Addressing source water protection

			concern however requires further water quality considerations to address both, AEP and multi-barrier source water protection. During the November 18, 2016 meeting, an example of constituents generated from urbanized land use typically dissolved in stormwater runoff was provided. Specifically we discussed about pesticides and potential on-site treatment process that could provide treatments. In line with the proposed wetland in the draft MDP, the on-site treatment would have to be a more complex facility, likely consisting of several cells with various functions. There are other alternatives but we strongly encourage the design team to work closely with The City of Calgary in developing the strategy opposed to submitting updates without engagement. references: • Associated Engineering “Source Water Assessment and Risk Characterization” dated October 2016 (SWARC) • Associated Engineering “Source Water Protection Plan” underway (SWPP) Design Guidelines for Future Conveyance System
17	Master Drainage Plan	5.2.1	Please consider adding a reference for drinking water guideline and the future Source Water Protection Plan.
18	Master Drainage Plan	5.3.4	Please provide clarification regarding the infiltration opportunities. Without hydrogeological investigation it should be made clear that LID feature function should be limited to water quality improvement through the LID media, but restricted from infiltrating to native soils/sediments.
19	Master Drainage Plan	5.3.4	“Stormwater Management Facility Design Guidelines - Upstream Facilities”, 10th Bullet: As noted in previous comments, the water quality improvement must also incorporate removal of dissolved contaminants to address one of the MDP objectives to match the bow river baseline or better.
20	Master Drainage Plan	5.3.4	“Regional Facilities as Constructed Wetlands” This statement does not reflect the source water protection concerns communicated to Rocky View County and their consultant, especially for contaminants introduced to source water by Glenbow Ranch ASP lands urbanization.

21	Master Drainage Plan	5.4	Subsurface Connections to Bears paw Reservoir Even though the SWPP is not complete, the constituents of concern were already identified and it is recommended that treatment for those appointed is included in the Glenbow Ranch MDP.
22	Master Drainage Plan	5.4.3	<i>“Evaluating these types of land uses and their proximity to natural drainage courses may play an important role in protecting the downstream areas and in turn the Bow River.”</i> As noted previously, this identifies the risk but lacks specific recommendations for prevention and protection measures or strategies.
23	Master Drainage Plan	5.6.2	Source Control Best Management Practices This section describes the proposed source control best management practices, including infiltration LID features, which is inconsistent with previous discussions and agreed upon approach. In absence of intent for a hydrogeological investigation within Glenbow Ranch lands, no infiltration should be promoted.
24	Master Drainage Plan	5.6.2	In the second paragraph of this section, please ensure consistency with other sections regarding the targets proposed elsewhere in the document.
25	Master Drainage Plan	Page 29	With respect to the first paragraph on page 29, the MDP should include a high level calculation of sizing for stormwater facilities. The approximate area and location of such facilities, even at a conceptual level, is an important inclusion.
26	Master Drainage Plan	7.0	The MDP does not demonstrate if volume control target can be achieved. The City of Calgary suggests that this be undertaken at least in concept to see how these targets may be achieved.
27	Master Drainage Plan	7.2	As noted previously, the erosion evaluation and protection needs to include consideration for run-off volume.