

October 30, 2015

Kurtis Cotton
Town of Castle Rock
Utilities Department
100 N Wilcox St.
Castle Rock, Colorado, 80104

Re: Pioneer Ranch: Concept Utility Letter

Dear Kurtis:

Project Information

This utility letter has been prepared in support of the annexation of Pioneer Ranch into the Town of Castle Rock. The parcel is owned by Scott Land Development Company, LLC. Atwell, LLC, is the applicant's civil engineer.

Project Location and Description

Pioneer Ranch is generally located on the east side of I-25 between the Wolfensberger Road exit and the Founders Parkway exit, north of the downtown area. The site consists of approximately 388 acres and is located within portions of Sections 35 and 36, Township 7 South, Range 67 West of the 6th Principle Meridian of Douglas County. The project site lies east of I-25, north of unplatted agricultural land, just east of Front Street, west of Founders Parkway, and south of Metzler Ranch Filing 5. Refer to the attached vicinity map and annexation map for additional location information

No major drainageways, existing irrigation ditches, or canals cross the site. The site lies within the Tributary C and D Master Plan. Approximately 56 acres are located east of the Castle Rock ridgeline along the eastern portion of the property. The ridgeline is approximately 800 feet west of Founders Parkway, and areas east of the ridge drain into the Cherry Creek Basin. Areas west of the ridge drain to the west to the East Plum Creek Basin. No existing wells or ISDS exist onsite.

Existing Water System

Water service for the parcels will be from existing Town of Castle Rock water facilities. Existing water infrastructure adjacent to the annexation parcels include:

East Side of I-25:

- 1) Existing 16" waterline in Woodlands Boulevard, north side. (Blue Zone)
- 2) Existing 12" waterline in Woodlands Boulevard, south side. (Purple Zone)
- 3) Existing 8" waterline along south side of Hazen/Moore Filing 2 (Blue Zone)
- 4) Existing 16" waterline in Front Street. (Yellow Zone)
- 5) Existing 20" water line in Founders Parkway (Red Zone)
- 6) Existing 10" raw waterline in Founders Parkway.

The site is included within the Towns 2010 Water Master Plan Update (Reference 3) and has been accommodated as un-annexed land. The site is served by the existing Red, Purple, Blue, and Yellow pressure zones and associated tanks. A portion of the Green Pressure Zone exists in the northeast corner of the site. The actual need for Green Zone pressure service will be evaluated in subsequent utility studies.

Existing Sanitary Sewer System

Sanitary sewer service for the parcels will be from existing Town of Castle Rock sanitary sewer facilities. All sanitary sewer is anticipated to be gravity flow, no lift stations are proposed. The majority of the parcels are located within the East Plum Creek basin. A small portion of the eastern end of the site along Founders Parkway is within the Cherry Creek Basin. Existing sanitary sewer infrastructure adjacent to the site includes:

East Side of I-25:

- 1) Existing 8" sanitary sewers in Rising Sun Drive and Crimson Sky Drive, east of Founders Parkway.
- 2) Existing 8" sanitary sewer along south side of Hazen/Moore Filing 2 and Woodlands Boulevard.
- 3) Existing 12" sanitary sewer stubbed from Rawhide Circle in the southwest corner of Metzler Ranch Filing No. 1.
- 4) Existing 24" sanitary sewer in Front Street, south of Scott Boulevard.

The site is included within the Town of Castle Rock's 2010 Wastewater Master Plan Update (Reference 4) and is accommodated as un-annexed land.

Proposed Water System

Conceptual connection points, extensions and pressure zones are shown on the attached Master Utility Map and generally follow the Town's Master Plan (Reference 3). The site lies within several pressure zones and the final pressure zones will be determined with the final design of each development plan and will be in conformance with the Town's Master Plan. Conceptual water demands have been calculated for the annexation area and are attached to this letter. The calculated total proposed 1179 SFE's are less than the prorata share of 2121 SFE's anticipated for the parcels within the Water Master Plan (Reference 3). This estimate also includes the potential of a school site located within a PLD parcel. Therefore, adequate water demands for these parcels have been anticipated within the Town's Master Plan. Refer to the attached SFE Comparison Summary for additional information. Per the preliminary project application comments, dated March 24, 2015, the Town stated they are evaluating the potential need for a tank site on the property to serve the Blue Water Zone. No other new supply facilities are anticipated to be necessary with this development. Any future development of the existing water infrastructure needed to serve this site is the responsibility of the Developer.

Proposed Sanitary Sewer System

Conceptual connection points and extensions are shown on the Master Utility Map. It is likely that the entire parcel will be designed to drain wastewater flows towards the west to the Plum Creek Basin, to minimize sewage flows to the Cherry Creek basin. However, this concept will be discussed in subsequent utility reports for the site. Internal extensions are dependent on layout and will be determined with the final design.

Due to the lower elevations of the parcels adjacent to Front Street, it is anticipated that a sanitary main may need to be bored under I-25 to create a western outfall for the sanitary sewer to the existing Liggett Road sanitary sewer. The parcels along Front Street are below the inverts of the existing sanitary sewer mains located to the north and south of the site. The future Pine Canyon to the south of Pioneer Ranch will need this outfall as well. An alternative to the I-25 bore would be a lift station to lift sewage to the existing sanitary mains to the north or south on the west side of I-25. This area will be further analyzed with subsequent utility reports to determine the best alternative. Land east of the area directly adjacent to Front Street can discharge sanitary sewage flows into existing mains at Woodlands Boulevard, as shown on the Master Utility Map.

Final Conceptual sewer demands have been calculated for the annexation area and are attached to this letter. The calculated total proposed 1103 SFE's are less than the prorata share of 2669 SFE's anticipated for the parcels within the Town's Wastewater Master Plan (Reference 4). Therefore, adequate wastewater demands for these parcels have been anticipated within the Towns Master Plan. Refer to the attached SFE Comparison Summary for additional information. Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the Developer.

Dry Utilities

Electric, gas, telephone, and cable services will be provided by the typical Town utility providers. Dry utilities will be extended internally from existing facilities adjacent to the annexation parcels, as necessary.

Stormwater Drainage

Regional stormwater facilities will be located as outlined per the Tributary C and D Master Plan. A large regional detention pond will be located along the western boundary with Metzler Ranch Filing 1. This regional facility will detain flows in order to maintain capacity within the existing storm drain system within Rawhide Circle and help prevent local flooding during major storm events. Refer to the Phase 1 Drainage Report prepared by Atwell, LLC (Reference 5) for information on stormwater drainage for the parcels.

References

1. Town of Castle Rock Water System Design Criteria Manual, Sept. 2012
2. Town of Castle Rock Wastewater System Design Criteria Manual, September 2012
3. 2010 Water Master Plan Update; Castle Rock Water Engineering; March 2011
4. 2010 Wastewater Master Plan Update; Castle Rock Water Engineering; March 2011
5. Phase 1 Drainage Report for Pioneer Ranch; Atwell, LLC.; October 2015.

Refer to the appendix of this letter for applicable calculations and maps. Please call with any questions regarding this conceptual utility analysis for the Pioneer Ranch.

Sincerely,

Byron J. Glenn, PE, MBA
Project Manager
Atwell, LLC