




Project Memorandum

To Laura Oliver, Deputy Recorder
From Shay Stark, Contract City Planner
Date July 19, 2021
CC
Subject Lighthouse Heights Subdivision – Final Plat – 1st Review



An application has been submitted to Elk Ridge City for the Lighthouse Heights Subdivision (Project). A TRC was held on July 19th. This memo included notes from the TRC as well as the following documents have been taken into consideration with this review:

The Lighthouse Heights Subdivision Final Plat submittal including:

- A. Elk Ridge Development Drainage Report, provided by PEPG Consulting llc, dated; April 8, 2021.
- B. Lighthouse Heights Subdivision drawings, provided by PEPG Consulting llc, dated; July 14, 2021, and consisting of 14 drawing sheets.
- C. Elk Ridge Draft Encroachment Agreement Details with Drawing.
- D. Geotechnical Engineering Study, CMT Labratories, dated November 24, 2020.

Project Overview

Zoning: R-1-15,000

Project Total Acreage: 8.70 acres

Total Number of Single-Family Residential Lots: 15 lots for a gross density of 1.72 dwellings per acre.

Submission and Checklist Compliance

- Check with Laura for any issues. Is the submittal complete? See Will Serve Comment
- Have “Will Serve” letters been provided? Dominion Gas is still outstanding.
- Please note any specific requirements service providers detail on the “Will Serve” letters.

Technical Review Comments

Geotechnical Study:

- There were four test pits all located near the ridge on the front property.
- Cemented soils stopped excavation in every pit. No pits were greater than 8 feet deep. These cemented soils may be a challenge for excavation.
- Page nine states: "Excavations deeper than eight feet are not anticipated at the site."
- Top of Page ten states: "All Excavations must be inspected periodically by qualified personnel. If signs of instability or excessive sloughing are noted, immediate remedial action must be initiated."
- Page ten also includes table 6.3 that provides recommendations for various fill types. Please note in the paragraph below this table: "On-site gravel soils may be suitable for use as structural fill, if processed to meet the requirements given above, and may also be used in site grading fill and non-structural fill situations." The second paragraph below table 6.3 states: "On-site silt soils are not suitable for use as structural fill but may be used as site grading fill and non-structural fill." Within the same paragraph: "We recommend the site grading fill thickness using on-site silt soils not exceed a maximum of 3 feet below structures, to minimize potential settlements."
- Page ten: "All fill material should be approved by a CMT Technical Engineer prior to placement."
- Page ten and eleven: Follow the recommendations provided by the Geotech in section 6.4 Fill Placement and Compaction for placement of fill, thickness of lifts and compaction requirements.
- It is recommended that the developer follow the guidance of the Geotechnical report.
- Please put a note on the drawings that Excavation and earthwork shall be observed by the Geotech. The Geotech shall provide a report of onsite observations including a map of the site detailing where specific field recommendations were provided.

Final Plat Drawings:

Easements:

- Construction Encroachment Easement: The applicant has provided a draft or outline for a proposed construction encroachment easement with Parkside Cove that will allow the applicant to lower the existing grades to construct a road from Elk Ridge Drive into the interior of the application parcels. The removal of the approximately 1,200 cubic yards of soils will reduce the existing grading by approximately 10 feet. This reduction in height will likewise reduce the height of the exposed cut on the south side of Parkside Cove. As this action will require encroachment on the Parkside Cove parcel it is right that an

encroachment easement or agreement will need to be in place. The points provided in the draft are valid and will be the basis for the Agreement. Will construction of the wall along the Parkside Cove boundary also require an easement?

- Are there any areas where special easements may be required? Dominion Gas line through lots 12 and 11.

Final Plat:

- Please provide Final Plat

Earthwork:

- Retaining Wall along Parkside Cove. Sheet C.40 notes that a structural engineer will design this wall. The City needs to see the design of this wall as part of this approval because the wall will be constructed as part of the development improvements and will be affected by the design of the drainage and loading from the street.
- During Preliminary the City agreed to allowing the cuts and fills that were being proposed but still had concerns about how this would affect Parkside Cove and how the drainage would be affected by the proposed design. The City is also concerned about the driveways on Elk Ridge Drive and making sure that they are not too steep to safely access the street. They are also concerned about grading from lot to lot and making sure that we don't end up with a hodge podge of retaining walls that do not act as a system and consider drainage with each lot. It is recommended that if you are the builder for these homes and have some control of layout and placement that you try to plan ahead and consider the possible grading of the property and incorporate the construction of retaining walls into the construction of the homes in places where you see that there will be drop offs between homes or lots. If these walls can be considered holistically between lots and not just on a per lot basis many potential future drainage and erosion issues can be prevented. These will be issues that may come up in discussions with Planning Commission and City Council.

Streets:

- As part of the Preliminary approval the City expressed concern with a low maintenance design for the area behind the sidewalk on the north side of the entry street and around the storm water basin. The City's preference is soils treatment (pre-emergent herbicide), weed barrier, and capped with 1" minus crushed gravel.
- Sheet C2.1 pavement and curb and gutter are dimensioned at 38 feet tbc to tbc the correct dimension is 38 feet lip of curb to lip of curb. The back of walk is located on the property line. The travel path in the cul-de-sac is good.

Water:

- Does the Fire Chief have comments? Nothing in writing.

- Sheet C5.3 In the vertical curve from Sta. 4+00 to 4+80 make sure that there is at least four feet of cover from the surface to the top of the water line.
- 6" fire hydrant services. Is the City okay with these? Will a 6" line be adequate to provide fire flow at these locations? Yes
- Show water crossing points and new water line in Elk Ridge Drive on the profiles. We need to see that there are no conflicts with crossings.
- Sheet C3.0 south end of Elk Ridge Drive water line. Does the City want the bend as shown or a tee, valve on up stream side and cap for future extension? A tee with a valve and cap on the south leg shall be shown in place of the elbow on the drawing.

Sanitary Sewer:

- Sewer will be a little shallow on Lot 7 & 8 and 14 and 15.
- Length between Manhole 1 and 2 needs to be 400 feet or less.
- Provide profile between Manhole 2 and ?Existing or new? manhole. What size is the existing or new manhole?
- The connection to the existing sewer line will need to be detailed.
- Sheet C7.2 do we have a situation where sanitary sewer crosses above the water? Yes on Elk Ridge Drive

Storm Water:

- Sheet C4.0: The drawings show the top of the basin as 5180 and the top of wall along Park Side Cove as 5180. Following the contours around the basin this north side looks to be the low point on the design. If for some reason the catch box in the basin or the 15" pipe exiting the catch box gets plugged and the basin over tops where will the water go? The key is to direct the overflow and not just let it run off at the current low point which would be over the wall into the senior homes.
- Update Drainage Report to match the current design.

Utilities:

- Power will need to be relocated.

Erosion Control:

Details:

- Please make sure that all references in the APWA Details are included on the detail sheets.

Postal:

- Where will the CBU('s) be located? Discussed two locations on the interior street.

Phasing:

- This development will occur as two phases.

Development Agreement:

- At the preliminary application issues are discussed that may require clarification in a Development Agreement. The Agreement will be drawn up and considered as part of the Final Plat approval process.
- Are there any exceptions to the city code or offsite improvements that need to be clarified in a Development Agreement?
Cul-de-sac length exception
Sidewalk on one side of interior road
Cut and fill

-END-