Reeve & Associates, Inc.

April 4, 2024

Project: Arrowleaf Subdivision
Re: Arrowleaf Subdivision – Engineer Review

Below please find our response to your comments dated 01 April 2024 from Tucker Weight at Weber County Engineering. Please note that our numbering reference system corresponds to your comment numbering system.

1. Please provide Storm Water calculations. How will you detain the Storm Water.
   - A summary of the stormwater calculations has been added to the plan set. Storm calculations have been tabulated by lot. The increase in site imperviousness increases flows by approximately 0.07 cfs per lot. The proposed roadside ditch will utilize rock check dams spaced every 100' to reduce velocities of stormwater runoff as well as giving the water residence time to infiltrate into the ground. The produced runoff from driveways and homes will be conveyed into proposed detention/retention ponds for each lot. All other flows will follow the historic path and flow directly to existing drainage ways.

2. The proposed subdivision will need to have curb, gutter and sidewalk as per the county commission. As a bare minimum there will need to be a deferral on the curb, gutter and sidewalk, which has been signed by the developer prior to final approval.
   - A deferral will be requested and signed by the developer. It should also be noted that access is provided with a private access easement.

3. Please provide storm water calculations.
   - A summary of the stormwater calculations has been added to the plan set. Storm calculations have been tabulated by lot.

4. You will need to provide either detention or retention for the storm water generated from the project. You will need to hold the 100 year storm event with a release rate of 0.1 cfs/acre..
   - The increase in site imperviousness increases flows by approximately 0.07 cfs per lot. The proposed roadside ditch will utilize rock check dams spaced every 100' to reduce velocities of stormwater runoff as well as giving the water residence time to infiltrate into the ground. The produced runoff from driveways and homes will be conveyed into proposed detention/retention ponds for each lot. All other flows will follow the historic path and flow directly to existing drainage ways.

5. Please show the seasonal creek as a 50' stream corridor setback from the high water mark on each side of the stream. Not just a 50' Setback.
    - Per conversation between the client and the County, the ephemeral stream is now designated as a seasonal creek. The highwater mark of the seasonal creek has been added to the seasonal creek corridor.

6. Is the proposed water tank for the hydrants? Or will it supply water to the homes also? Check with Fire district to make sure there is enough fire flow.
    - The proposed water tank is for the hydrants as well as the water supply for the homes. The proposed water tank has been approved by Weber County Fire Marshall.

7. On lot 3 there is a 10' private culinary water easement. Does that end at the creek? Or does it go further than that?
    - The easement terminates at the seasonal creek as it is an existing emergency overflow line for the existing water tank.

8. A note will need to be added to the plat stating: "Due to the topography and the location of this subdivision all owners will accept responsibility for any storm water runoff from the road adjacent to this property until curb and gutter is installed."
    - This note has been added to the plat.

9. There will need to be an easement given for the existing ditches/drains in the s subdivision.
    - There are no existing ditches on site, however, existing drainage features have been given easements.

10. A geotechnical report needs be completed for the subdivision.
    - A geotechnical report has been completed and will be provided with the final submittal.

11. Because soil conditions vary throughout the county, it is now necessary to provide an engineered pavement design showing required sub-base, road-base, fabric, and asphalt thickness as needed for soil type. Asphalt thickness shall not be less than 3 inches. The county engineer is now requiring a minimum of 8" of 4" minus sub-base and 6" road-base. Compaction tests on both will be required.
    - Pavement section details have been added to Sheet 2 of the plan set.

12. Please provide a cost estimate for the improvements when we get close to approving the plans.
    - A cost estimate will be provided with the final submittal of plans.

13. All improvements need to be either installed or escrowed for prior to recording of the subdivision.
    - Acknowledged. An engineer's cost estimate will be provided when the plans are submitted.

14. How do the storm drainage basins work? Does that collect water from the roads or the lots? If its the lots will they be required to landscape or direct water from their homes to the basins? Is there a detail for the storm drainage basins?
    - The storm drainage basins will capture runoff generated from the proposed homes. They will be constructed as the individual lots are built/graded out and will be a part of the final site plan for their respective lot. There is not a standard detail for the drainage basins.

15. Add the 50' Stream corridor setback from the high water mark to each side of the stream to the plat.
    - Per conversation between the client and the County, the ephemeral stream is now designated as a seasonal creek with a 20' building setback on either side of the seasonal creek (40' total) and a 25' utility setback on either side of the seasonal creek (50' total).

16. Provide plans for Water Tank.
    - Water tank plans will be provided with the final submittal.

17. What will the velocity in the swale be? will the rock swale hold up to those kind of steep swales?
    - The swales will be lined with appropriately sized riprap to accommodate the flow velocities of the swale in addition to check dams spaced every 100'. The maximum flow velocity will less than 8 ft/s.

18. What will the slopes be on the driveways?
    - The slopes of the driveways are undetermined at this time. They will be apart of the final site plan for their respective lot.

19. Please check with the State to see if a Stream Alteration Permit is required.
    - No stream will be altered as a part of this project.

20. The plans call out cut swale for water to get into existing drainage. Please show on plans those existing drainage. We will need easements for these drainage
    - A 10' drainage easement has been dedicated for the ditches. See the plat.

21. Please add a 10’ PUE along 2900 East
    - A 10’ PUE has been dedicated along 2900 East. See the plat.

We appreciate your review and trust we have changed and/or clarified all of your comments. If you have any questions, or we can be of further assistance, please let us know.

Sincerely,

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