December 11, 2023

Stig Owens, PE
Sekiv Solutions
14207 Pond Chase Place
Midlothian, VA 23113

RE: Meadow Springs Run Subdivision
LOCATION: Chartwood Drive and Meadow Rd
POD NO. 2023-00259

Dear Mr. Owens:

The Department of Public Utilities (DPU) has reviewed the subdivision construction plans submitted to the Planning Department on November 27, 2023.

Please address the following comments and **resubmit revised construction plans** for review. Water and Sewer Agreements that must be executed by the Owner and the County for water and sewer improvements **have not** been executed.

General

1. Owner to submit executed Utility Agreements prior to approval of building permits, prior to the utility pre-construction meeting and authorization to proceed with utility construction by DPU and prior to subdivision plat approval.
2. Since average sewer flows exceed 40,000 gpd when offsite acreage is factored into the total design flow, utility plans shall be submitted to DEQ for acceptance and a certificate to construct (CTC) obtained from DEQ prior to DPU approval. A flow acceptance letter from DPU will be forthcoming to accompany this submittal.
3. Please revise the Project Summary Report in accordance with all subsequent plan review comments and per the following:
    - Provide correct minimum pressures within hydraulic evaluation table for all three conditions.
    - Complete the maximum day flow values in the first table.
    - Provide correct peak hour and maximum day demands in lower table using a peak hour demand of 2.7 times the average demand and the maximum day demand of 1.75 times the average demand.
    - Update pipe size lengths to match the plans.
    - Show a fire flow of 1000 gpm.
4. Revise the Engineering Report in accordance with all subsequent plan review comments and per the following:
    - Revise average sewer flow to match the design basis and number of lots.
    - Include offsite sewer flow from adjacent parcels within the sewer shed based on latest land use projections.
    - Provide peak flow and peak factor based on chart relationship shown on form F-2.
    - Revise average and peak hour demands for water to match what is proposed.
    - Update fire flow to 1000 gpm and show resultant lowest pressure per model.

Cover sheet

5. Update number of lots in site data to 46.

C-109 thru C-111(Utility Plan)

6. Provide a lighter stippling (30%) for visual clarity of waterline extension within Chartwood Drive and Meadow Road. The portion where pavement is replaced is displaying at too dark of a presentation to see the waterline and valves when documents are scanned.
7. Provide benchmarks consistent with DPU Spec. 5.5 L.
8. Revise water and sewer material quantities in accordance with all comments and per the following:
    - Revise number of 5/8" meters and SIPs to be 46.
    - Revise all quantities to match the updated design.
9. Provide a minimum of three (3) GIS northing/easting points on sheet C-109.
10. Provide either 6" or 4" water main after the last hydrant at each of the cul-de-sacs and revise all fittings accordingly.
11. Connect laterals for lots 10 and 13 directly to the sewer main at a perpendicular angle.
12. Label fire hydrant at the boundary of lots 34 and 35.

C-201(Road Profiles)

13. For all sanitary sewer profiles, provide separate sewer stationing starting at the most downstream connection and proceeding upgradient with equalities at each junction manhole. Minimize stationing changes by using the longest chain of sewerline runs in the same stationing sequence. Locate sewer stationing away from road stationing to provide clarity.
14. Provide profiles for any sanitary laterals where there is 1.5 feet or less of separation from storm sewers or water mains. Laterals should have at least 1 foot of separation where crossing under storm sewers and water main and at least 6" where crossing above the same.
15. Provide a vertical waterline adjustment for water main within Chartwood Drive instead of the deflection.
16. Revise the following for the Hawk Ridge Road profile:
    - There appears to be a direct conflict between the lateral for lot 42 and the water main. Extend vertical waterline adjustment to resolve.
    - Relocate lot 41 water service so that it is not within the area of the vertical waterline adjustment.
17. Revise the following for the Kingfisher Court profile:
    - Label sewer downstream of manhole 27 as 8" DIP in profile and on plan view.
18. Provide mechanical joint restraint for dead end waterline at Station 22+60 on Meadowrise Lane profile.

C-202(Storm Sewer Profiles)

19. Adjust storm sewer profiles for utility crossings in accordance with all comments (e.g., 1.5 feet separation between waterline and bottom of storm pipe).

C-203 thru C-204(Utility Profiles)

20. Provide ductile iron pipe for sewer from manholes 1 to 2 and 7 to 8.

L-101 thru L-102(Landscape)

21. Locate tree to be 10 foot minimum from hydrant near lot 46.

LI-101(Lighting)

22. Lighting plan is very difficult to read in seeing the locations of light poles near the street. Please remove photometric numbers and large labels (e.g., A@15', etc.) and use larger symbols for the light poles. Also include a scale.
23. Position light poles to not block continuation of private water and sewer services towards each house.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4501

Sincerely,

John L. Clark PE
Utilities Engineer

cc: Kevin Jones, Meadow Developments LLC

bc: Marchelle Sossong
Daniel Ivy
Christina Goggin, Planning

JLC/vr