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Memorandum

To: Stacey Nerger, Senior Planner

Date: January 13, 2021

From: Tyler Sandt, Development Review Engineer
Michael Walton, Project Engineer

Cc: Alex Mestdagh, P.E. Engineering Services Manager
Michael Grabczyk, P.E. Stormwater Project Manager

Subject: Parker and Pine Multifamily Filing 1 AMD2 Lots 1-3 – Engineering 2nd Review

The Engineering Department has reviewed the documents submitted for Parker and Pine Filing 1 AMD2 Lots 1-3 Multifamily Development. The submittal consisted of the following documents:

Document	Date Received
Final Plat	December 17, 2020
Drainage Report	December 17, 2020
Road and Storm Plans	December 17, 2020
Utility Plans	December 17, 2020
Plat	December 14, 2020

The site is located near the southwest corner of Parker Road and Pine Lane. Based on our review we have the following comments:

Traffic and Roadway Review Comments

The following comments concern traffic, access, roadway design, and construction standard issues for the subject property. They are based upon our review of the submittal documents in accordance with the criteria presented in the Town of Parker's Roadway Design and Construction Criteria Manual (RDCCM), as revised, July 2015. Additional regulatory and planning documents may have been utilized in the review, and are referenced in the comments where appropriate.

Road and Storm Construction Plans

1. The adjustments made to the Lot 2 and Lot 3 accesses are not sufficient. The proposed condition would most likely cause a conflict on opposing left turns. Additionally, the Lot 3 stop bar is unusable given its proximity to the curb. It appears the most logical solution would be to realign the Lot 3 access to directly match the proposed Lot 2 access.

Replat

2. Dedicate 25-foot drainage easements over all proposed storm sewer.

Landscape Plans

3. Remove or relocate all trees proposed within 7-feet of the storm sewer. This includes existing trees adjacent proposed storm sewer.

4. Reference Detail 24 in Appendix A of the RDCCM when drawing sight triangles and adjust them accordingly. Ensure no trees or landscape above 2-feet are proposed within.

Stormwater Review Comments

The following comments concern drainage, erosion and sediment control, and non-point source pollution control issues for the subject property. They are based upon our review of the submittal documents against the criteria presented in the Town of Parker's, *Storm Drainage and Environmental Criteria Manual (SDECM)*, as revised, February, 2014. Additional regulatory and planning documents were utilized in the review, and are referenced in the comments where appropriate.

Road and Storm Construction Plans

5. All storm sewer systems collecting drainage from the proposed drive aisles and parking areas shall be considered public and must adhere to the standards and specifications outlined within Section 6.3.3 of the Town's SDECM, including the use of RCP and dedication of drainage easements. Several lines and structures collecting drainage from parking areas noted without drainage easements. Landscape drains, roof drains, and leaders for these systems are considered private and may be constructed with plastic pipe and catch basins. These private systems must connect to the public storm sewer system at an inlet or manhole structure.

6. Please ensure all storm sewer alignments are coincident with the storm sewer network. Storm Lines A1 and C1 specifically noted as being off.

7. Please provide a detail specific to where the proposed detention pond trail crosses the existing maintenance access path. This detail should show that the required maintenance access path material depths are to be maintained below the gravel path.

8. In general, please limit to a 5-foot maximum drop between storm sewer inverts across structures. Inlet C1.1 can incur a larger drop, but please increase structure depth to approximately 10 feet to minimize the drop.

Drainage Report

9. Please provide flow arrows, a north arrow, and a scale on the proposed Drainage Map. Please also ensure storm sewer network styles are appropriately reflecting existing or proposed lines.

10. A previous response regarding Sub-Basin OS-1 stated "If desired, the grated manhole lid could be maintained post construction to help capture this area within the Filing 1 water quality and detention pond." Any area which can be treated and/or detained on site should be. Please only discharge flows offsite if necessary. It seems a landscape drain system through this area could potentially suffice for capturing these flows.

11. If OS-1 must be discharged offsite, please provide the appropriate references and/or calculations to prove the Twenty Mile Road storm sewer and regional detention has available capacity to convey, treat, and detain these flows.

12. Please verify the delineation of Sub-Basin OS-1. The plan southeast portion of the Sub-Basin appears to flow to the existing curb inlet, the plan south portion appears to flow to the private drive which is taken plan south down Twenty Mile Road to an inlet which directly discharges to Baldwin Gulch, and the remainder appears to flow plan west to Twenty Mile Road where it would be conveyed north to the existing storm system which goes to the Twenty Mile Regional Detention Facility. Please also note that the portion of the Sub-Basin which appears to discharge directly to Baldwin Gulch would likely require tier 3 treatment following revised delineation.

13. It is unclear from the narrative which basins from the "Existing Report Design" are being compared to the Proposed Design. Please either provide an Existing Drainage Map with

the proposed basins overlaid on top, or provide the exact basins being considered for the comparison within the narrative.

14. The inlet calculations provided for PA02 and PB03 indicate carry-over flows in the 100-year storm event. Please provide additional details and calculations describing how these carry-over flows will be captured or discharged offsite.

15. Label StormCAD HGL profiles to reflect which storm event is being represented.

16. The highlights in Appendix B do not have transparency applied. Covers the values rather than highlights them.

Grading and Erosion Control Plans

GENERAL COMMENTS

17. Please note that the CBMP estimate will be reviewed with the Grading Permit after all CBMP comments have been addressed and the site plan is near approval.

18. Please ensure the storm sewer network styles are appropriately reflecting existing or proposed lines.

19. Provide sidewalk transition protection (STP) for all of the existing and proposed curb ramps within the limits of construction (LOC). Several proposed ramps missed on the interim/final plans.

20. Provide perimeter control as either Silt Fence (SF) or Construction Fence (CF) around the entire site, including the extents of the LOC which surrounds the Existing Pond.

21. Provide Detention Pond Protection (DP) in the Existing Detention Pond.

22. Please provide unique blocks for each type of inlet protection used. This will help to avoid confusion in the field regarding which type of protections is required where. Also, duplicate inlet protection labels and blocks provided in legend. Only provide 1 instance of each measure within the legend.

23. Provide existing contour labels.

INITIAL CBMP PLANS

24. The proposed detention pond trail should not be shown on the Initial CBMP plan.

25. Use silt fence (SF) in lieu of construction fence (CF) along the northern boundary of Lot 2.

INTERIM/FINAL CBMP PLANS

26. Please provide the existing slope labels in areas which fall outside of the proposed grading but within the Limit of Construction (LOC).

27. Northern Vehicle Tracking Control (VTC) provided in Lot 1 should match orientation provided in Initial CBMP plans. If the location for this VTC does not work in both, the initial placement should be revised, or access should be limited to the south entrance.

28. Provide and identify sediment control logs (SCL) along all paved areas adjacent landscape/pervious areas. This includes landscape islands, pedestrian walks, and at top back of curb along all roadways.

The submittal is not in general conformance with the Town of Parker's *Roadway Design and Construction Criteria Manual* and *Storm Drainage and Environmental Criteria Manual*. The submittal must be revised and re-submitted for review.

Link to Engineering Standards and Criteria:

http://www.parkeronline.org/210/Standards-and-Criteria

An attempt has been made to identify all of the items that do not meet the Town of Parker's design criteria; however, it remains the developer's responsibility to ensure that all criteria are met.

If you have any questions regarding the comments please do not hesitate to contact the Engineering Department at (303) 840-9546.