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Memorandum

To: Stacey Nerger, Senior Planner

Date: March 31, 2021
DESIGN TEAM RESPONSE DATE: APRIL 19, 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 3rd 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:

<u>Document</u>	<u>Date Received</u>
Final Plat	February 17, 2021
Drainage Report	February 17, 2021
Road and Storm Plans	February 17, 2021
Utility Plans	February 17, 2021
Plat	February 17, 2021

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.

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Landscape Plans

1. Per previous review, remove or relocate all trees proposed within 7-feet of the storm sewer. This includes existing trees adjacent proposed storm sewer.
RESPONSE: ADDRESSED. ALL TREES WITHIN 7-FT OF STORM SEWER REMOVED OR RELOCATED.
2. Per previous review, 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.
RESPONSE: PER DISCUSSIONS WITH TOWN STAFF, A SIGHT TRIANGLE AT THE NORTH ACCESS DRIVE FOR LOT 3 HAS BEEN ADDED TO THE PLANS AND LANDSCAPING HAS BEEN REVISED TO MEET INTERSECTION SIGHT DISTANCE TRIANGLE REQUIREMENTS.

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

3. Please revise the drainage easement to extend past and fully encompass Inlet B3.
RESPONSE: A REVISED PLAT HAS BEEN INCLUDED IN THE RESUBMITTAL WITH AN UPDATED EASEMENT FOR INLET FOR B3.
4. Manhole C1 shows three pipe inverts in with one pipe invert out on the profile label. The plan view of the proposed layout only shows two pipe inverts in with one pipe invert out. Please verify and revise as needed.
RESPONSE: MANHOLE C1 CALLOUTS REVISED.

Drainage Report

5. The existing versus proposed basin delineation exhibit provided is not representative of the Master Report basin delineation used for designing the existing inlet in Twenty Mile Road. The original design of inlet 28 also indicates a bypass flowrate of 1.5 cfs. It appears the bypass flow is picked up at inlet S28. Please provide inlet calculations to

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show that inlet S28 has capacity for the additional flow being released offsite from basin OS1.

RESPONSE: INLET S28 WAS ANALYZED AS A DUEL CDOT/DENVER 13 COMBINATION INLET. BASED ON THE PROVIDED INLET CALCULATIONS ANALYZED AS REQUESTED, INLET S28 HAS ADEQUATE CAPACITY FOR ITS OWN DRAINAGE BASIN AND BYPASS FLOWS FROM INLET 28 (WHICH HAVE BEEN UPDATED TO INCLUDE THE ADDITIONAL FLOWS FROM BASIN OS1).

6. Table 1 and Table 3 present differing values for the Existing Report's impervious value. Please revise to match.

RESPONSE: ADDRESSED.

7. Please revise design point and basin labeling provided with the inlet calculations to match what is shown on the drainage plan.

RESPONSE: INLET CALCULATIONS HAVE BEEN UPDATED TO INCLUDE THE INLET NAME, DESIGN POINT, AND ASSOCIATE DRAINAGE BASINS FOR THE INLET ANALYSIS.

8. For compensatory storage the overall release rate from the site should equal 90 percent of the 100-year historic release rate which is provided in the Existing Drainage Report. This would make the overall maximum site release 9.7 cfs rather than the 13.1 cfs noted from the Master Drainage Report.

RESPONSE: PER DISCUSSIONS WITH TOWN STAFF, THE REGIONAL POND OUTLET STRUCTURE HAS BEEN REDESIGNED TO REDUCE THE PEAK OUTFLOW. PROPOSED IMPROVEMENTS TO THE POND OUTLET STRUCTURE ARE LIMITED TO A REVISED ORIFICE PLATE AND A REVISED RESTRICTOR PLATE. THESE IMPROVEMENTS WILL BE PART OF THE MULTI-FAMILY CONSTRUCTION. THE REVISED POND PEAK OUTFLOW IS 4.5 CFS BELOW THE MAXIMUM RELEASE RATE ALLOWING FOR ADDITIONAL COMPENSATORY STORAGE FOR FUTURE LOTS IN THE REGIONAL BASIN. AS REQUESTED, A REPORT ADDENDUM TO THE FILING 1 DRAINAGE REPORT HAS BEEN INCLUDED IN THE RESUBMITTAL.

Grading and Erosion Control Plans

GENERAL COMMENTS

9. Revise slope label along western boundary. Currently showing a 281% slope due to the retaining wall.

RESPONSE: ADDRESSED. SLOPE LABEL CORRECTED.

INTERIM/FINAL CBMP PLANS

10. 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. Specifically noted as still missing along eastern boundary of Lot 1 and along the northern boundary of Lot 3.

RESPONSE: ADDRESSED. ADDITIONAL SCL ADDED TO THE PLANS.

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11. Sediment Control Log (SCL) linework is shown spanning Lots 2 and 3 which does not correspond to any of the proposed site features. Appears to be an artifact, please remove or revise.

RESPONSE: ADDRESSED.

12. The two area inlets in the paved area of Lot 3 should have Inlet Protection for Area Inlets in Pavement (IPAP) control measures rather than the Inlet Protection for Area Inlets Not in Pavement (IPAN) control measures shown.

RESPONSE: ADDRESSED. TYPE OF INLET PROTECTION CORRECTED.

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.