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Memorandum

To: Carolyn Parkinson, Associate Planner

Date: December 23, 2019

From: Tyler Sandt, Development Review Engineer
Michael Grabczyk, P.E. Project Engineer

Cc: Alex Mestdagh, P.E. Engineering Services Manager

Subject: Parker and Pine Subdivision Filing 1 – Engineering 3rd Review

The Engineering Department has reviewed the documents submitted for Parker and Pine Subdivision Filing 1. The submittal consisted of the following documents:

Document	Date Received
Final Plat	November 18, 2019
Drainage Report	November 18, 2019
Road and Storm Plans	November 18, 2019
Utility Plans	November 18, 2019
Traffic Study	November 18, 2019

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.

December 23, 2019

Road and Storm Construction Plans

1. Please add the following notes to site plan:

   "Any traffic control in Twenty Mile Road or Pine Lane right-of-way will require a Town right-of-way permit."

   "Any traffic control in Parker Road right-of-way will require a CDOT right-of-way permit."

2. Per previous discussion with the applicant the site's north access is to be a three-quarter access. Please show the appropriate signage and striping modifications to restrict the left-out of the site.

3. Per previous discussion with the applicant, revise the northbound striping at the Parker-Pine intersection to allow for double lefts and include any necessary signal modifications.

4. On future submittals, provide intersection detail sheets for the site's three primary accesses.

5. Please show the faded portions of the Parker Road crosswalk being replaced.

6. Please confirm that no offsite easements are required to work in the existing detention pond.

7. Per previous review, the curve in the internal access road, immediately west of Parker Road, should be adjusted to provide an appropriate radius for vehicles turning from that roadway. Please also provide that curve value on the curve table.

Utility Construction Plans

8. Add the following note to the overall utility plan:

   "The proposed utility connection will require a Town right-of-way permit prior to commencing work. The Town prefers connections to be bored to the extent possible, and any street cut allowed by the Town will be required to be patched according to the Town's construction standards and details. The limits of patching will be determined by the Town at the time of construction. The Town of Parker does not allow roadway closures for utility work."

Traffic Study

9. Traffic study comments will be provided under the "Reviews" tab on eTrakit.

Replat

10. Add the following notes to the plat:

"PRIVATE ACCESS DRIVES/ROADWAYS MUST BE CONSTRUCTED PRIOR TO THE ISSUANCE OF TEMPORARY CERTIFICATE OF OCCUPANCY AND/OR CERTIFICATE OF OCCUPANCY FOR ANY DEVELOPMENT OCCURRING ON PROPERTY SHOWN HEREIN."

"PROPERTIES IN THIS PLAT ARE SUBJECT TO A PERPTUAL, NON-EXCLUSIVE CROSS PARKING EASEMENT FOR THE SHARED USE OF ALL PARKING SPACES SITUATED WITH THE PROPERTIES SHOWN HEREIN. THE OWNER OF EACH LOT SHALL KEEP AND MAINTAIN THE PARKING SPACES CONTAINED WITHIN THERE RESPECTIVE LOT IN A COMMERCIALLY REASONABLE CONDITION AND STATE OF REPAIR."

11. It appears that the Replat comments from the first engineering memo were not addressed. Note that comment 8 from the first review memo can be disregarded.

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

12. Identify the structure type and size within all storm labels in both plan and profile.

13. Provide HGLs for the minor and major storm events on all storm profiles.

14. Pull the forebays back into the pond embankment to eliminate the condition of exposed RCP.

15. Per USDCM Vol. 1, Ch. 7.4.2, match soffit elevations at pipe size changes where possible. Correct conditions where the soffit elevation of a smaller pipe is lower than that of a larger exiting pipe.

16. Modify or replace the existing outlet structure to bring the pond up to current USDCM standards.

17. Provide details for all of the proposed pond structures, including but not limited to forebays, trickle channels, outlet structure, maintenance section, and emergency overflow spillway.

18. **Sheet C5.5:** Label Inlet A02 in plan view.

19. **Sheet C5.6:** Inlet B00 is graphically shown above grade, please correct.

20. **Sheet C5.6:** Address the crossing conflict with the existing water line.

21. **Sheet C5.6:** Fix the Inlet A02 callout.

22. **Sheet C5.6:** Identify the gray circle on the storm line between Inlet B00 and MH B01.

23. **Sheet C5.9:** Correct the manhole depths shown in both profiles.

24. **Sheet C5.10:** Lower the 18" stub to be no more than a 4' drop to the exiting flowline. Also identify the stub length, size, and material in profile view.

Drainage Report

25. Revise the narrative to include discussion on updating the pond to current code and include new pond calculations within the report appendix.

26. Sheet 8: Correct the assumed imperviousness for sub-basin 1.1 from 0.85% to 85%.

27. Sheet 8: Correct the reference of roof drains for conveyance of sub-basin 9.0.

Grading and Erosion Control Plans

28. Omit all existing and proposed utilities from the CBMP Drawings, except those relating to stormwater.

29. Label Baldwin Gulch and identify the associated 100-year floodplain on each of the CBMP plan sheets.

INITIAL CBMP PLANS

30. Add a callout/label on all properties adjacent to the project stating that no work shall occur in these areas.

31. Include perimeter controls for the entire LOC. Perimeter control may be silt fence (SF) or sediment control logs (SCL). construction fence (CF) may be used as an alternative when upstream of disturbed areas.

32. The proposed grading extends beyond the perimeter control silt fence shown on the Initial CBMP plans. Place the silt fence beyond the extents of proposed grading or up to the back of walk when adjacent to existing public right-of-way sidewalk.

33. Provide a callout at the driveway entrance off of S. Parker Road which states that no construction access shall take place at this location without a VTC.

34. Terminate the proposed diversion ditch (DD) west of Lot 4 into the proposed storm drain.

INTERIM/FINAL CBMP PLANS

35. Revise the CBMP Plan (Final) to (Interim/Final). Show the perimeter controls on this interim/final CBMP plan as well. These controls shall only be removed at the discretion of the Town's environmental inspector based upon the site's state of stabilization/revegetation.

36. Provide and identify erosion control blanket (ECB) along disturbed landscape strips within the public right-of-ways of Twenty Mile Road, Pine Lane, and South Parker Road. This ECB shall only be installed between completion of the new sidewalk/irrigation and the installation of the final sod/landscaping. If landscaping is installed immediately following the work (within 14-days), then the installation of said ECB may not be required.

37. Add a note outside the perimeter controls along the public sidewalks to be modified/replaced that states the following:
"All work within public right-of-way (ROW) will require a ROW permit. Interim CBMPs for work within the Town's ROW shall be coordinated with the Town's environmental inspector prior to beginning of ROW work."

38. Revise "permanent stabilization" within the CBMP legends to read Seeding, Mulching, and Crimping (SMC) per the Town's detail. A note may be added to utilize Town of Parker Seed Mix 3 per the landscape plans. The environmental inspector will only have a copy of the CBMP plans, therefore pertinent landscape information such as seed mix should also be identified on the CBMP plans.

39. Correct the IPAN symbol location nearby the eastern outfall to the pond.

40. Clarify the inlet protection nearby the southeastern corner of Lot 6. If two inlet protections are needed, show the second protection symbol over the open space drain. Otherwise, callout only a single inlet protection type.

41. Correct the inlet protection symbol to be centered on the inlet in the southwest corner of Lot 5.

42. Concentrated flows exiting the curb and gutter from a street stub into open spaces are prone to causing erosion issues in interim condition. Provide a temporary diversion ditch (DD) from the western street stub below Lot 6 (southern curb line) to the proposed perimeter DD or to the proposed area inlet to the southwest.

43. Provide a temporary diversion ditch (DD) from the street stub entering Lot 4 (western curb line) to the proposed DD along the southern boundary of the site. This is to reduce erosion from bypass flows of the adjacent inlet.

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.

December 23, 2019