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Memorandum

To: BrieAnna Simon, Associate Planner
Date: December 4, 2019
From: Tyler Sandt, Development Review Engineer
Michael Grabczyk, P.E. Project Engineer
Cc: Alex Mestdagh, P.E. Engineering Services Manager
Jacob James, P.E. Stormwater Manager

Subject: Horseshoe Ridge Block 1 Lot 1 – Learning Experience Site Plan – Engineering 2nd Review

The Engineering Department has reviewed the documents submitted for Horse Shoe Ridge Lot 1 Block 1 Site Plan. The submittal consisted of the following documents:

<u>Document</u>	<u>Date Received</u>
Construction Plans	November 6, 2019
Drainage Report	November 6, 2019
Site Plan	November 6, 2019

The site is located southwest of the intersection of Triple Crown Drive and Pardee Street. 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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Site Plan

The following site plan comments were not addressed from the last review:

1. The proposed drainage infrastructure will need to be covered by drainage easements. On future submittals, provide a legal description and exhibit for the entire pond area. Please also provide the legal descriptions and exhibits for the proposed storm pipe and structures.
2. Show sight triangles on the landscape plan and ensure no trees, landscape, or solid structures above 2-feet are proposed within the sight triangles.
3. Show storm sewer on the landscape plan and ensure no trees are proposed within 7-feet of the storm sewer.

Traffic Conformance Letter

Please upload the revised Traffic Conformance Letter with the next submittal and ensure the following comments are addressed:

4. This site is proposing 722 more trips than initially approved. The Town does not see this increase as “marginal”. The applicant will need to provide a more detailed analysis including intersection calculations as well as discussion on any mitigation required.
5. The Fast Casual Restaurant Land use does not appear to be appropriate for a building with a drive through. Please replace this with the Fast Food with Drive Through use and adjust the counts accordingly.

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

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6. Sheet C-2.1: Label all of the storm structures and pipes in plan view. Also identify the structure type (Type-R inlet, 4' MH, etc.) within both plan and profile views.
7. Sheet C2.1: Fix the graphical error shows the manhole sumps several feet lower than the discharge flowline.
8. It appears that the storm pipe #3 connection to Type-R inlet #12 interfaces within the deck of the inlet. The Town recognizes the downstream constraints of the existing inlet, however the Type-R must have a proper connection conforming to CDOT specifications.
9. The off-site pond improvements are located within Tract C, owned by the Diocese of Colorado Springs. A temporary construction easement with the Diocese will be needed to perform the pond modifications. In the event that the proposed modifications extend the pond past the boundaries of Tract C, then a drainage easement will be needed over the encroachment to Lot 1 of Block 2.

Drainage Report

10. The 5-year storm event appears to have a developed peak flow of approximately 9 times the existing peak flows. Provide orifice plate modifications to reduce the 5-year peak flows to a more reasonable 1.5-1 ratio. One option could be sealing/closing some of the existing orifices below the 5-year peak to achieve a better ratio.

Grading and Erosion Control Plans

11. Remove references and line work to the sanitary line within the CBMP plan sheets.
12. Provide sediment control log (SCL) along the back of curb around all landscape islands. One island is still missing the SCL.
13. Provide TSB sizing and drainage information on the plan. Also identify the location and outfall of the spillway and outlet pipe.
14. Utilize the IPCOG inlet protection for the Type-R on Triple Crown Drive in-lieu of the identified IPAP.
15. Provide silt fence (SF) or sediment control log (SCL) in the initial CBMP plan along all existing sidewalks adjacent to the site. Also provide SF or SCL along the southern site boundary in the initial CBMP plan.

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16. Provide a stabilized staging area (SSA).
17. Label the VTC adjacent to the southeastern site boundary.
18. Remove note 17 from the initial CBMP plan sheet. Revegetation and stabilization, both temporary and permanent, shall follow the Town of Parker notes and details.
19. Add the following note to the pond CBMP plan sheets:

“TO REDUCE THE POTENTIAL FOR CLOGGING OF DEBRIS GRATES, NO STRAW MULCH SHALL BE USED WITHIN THE EXCESS URBAN RUNOFF VOLUME OF A DETENTION BASIN. INSTEAD, EROSION CONTROL BLANKET SHALL BE INSTALLED FOR A WIDTH OF AT LEAST 6-FEET ON BOTH SIDES OF THE CONCRETE LOW FLOW CHANNELS OR UP TO A DEPTH OF 1-FOOT IN SOIL RIPRAP OR BENCHED LOW FLOW CHANNELS. ADDITIONALLY, HYDRAULICALLY-APPLIED WOOD FIBER MULCH, STABILIZED FIBER MATRIX, BONDED FIBER MATRIX, OR FLEXIBLE GROWTH MEDIUM SHALL BE USED IN ALL OTHER AREAS WITHIN THE EXCESS URBAN RUNOFF VOLUME OF THE DETENTION BASIN. THE BLANKET AND HYDRAULICALLY-APPLIED MULCH SHALL COMPLY WITH THE MATERIALS AND INSTALLATION REQUIREMENTS FOR EROSION CONTROL BLANKETS AS REQUIRED BY THE TOWN’S CBMP PROGRAM, AND WHERE APPLICABLE, THE PRODUCT MANUFACTURER.”

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.

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