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Memorandum

To: Stacey Nerger, Senior Planner

Date: July 12, 2024

From: Charles Kudlauskas, P.E., Senior Development Review Engineer
Robert Seacat, Stormwater Permit Coordinator

Cc: Alex Mestdagh, P.E., Engineering Services Manager
Tom Williams, P.E., Director of Engineering/Public Works

Subject: SP24-062 Crown Point Filing 1 Amendment 30 Lot 1 Hospital Addition –
Engineering 1st Review

The Engineering Department has reviewed the documents submitted with this application. The submittal consisted of the following documents:

| <u>Document</u> | <u>Dated</u> |
|-------------------|--------------|
| Construction Plan | May 2024 |
| Site Plan | June 2024 |
| Drainage Letter | May 2023 |
| Traffic Letter | May 2024 |

Thank you for the opportunity to review this application. 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, November 2020. Additional regulatory and planning documents may have been utilized in the review and are referenced in the comments where appropriate.

CONSTRUCTION PLANS – CIVIL

1. Please adjust the heading to conform to standard formatting. (See redline comments)
2. The Vicinity Map shall be at a scale of 1"=2,000' and include location and names of all aerial roadways within one mile of proposed construction. Include any major drainageways in this area.

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3. Please include contact information (company, address, phone and Contact) for Developer, Engineer, Town of Park, and Utilities on the Cover sheet. Please provide all sheets formatted to the Town's standards as required per the Town's Roadway Design and Construction Criteria Manual (RDCCM). Please reference section 2.3 of the RDCCM for the required construction plan submittal requirements.
4. Please include a Key Map for sheets that consist of plan views showing a portion of the overall site (see redline comments).
5. Please label all private driveway/roadway as "Private" throughout the plans.
6. Per Section 3.7 of the RDCCM: Spot elevations for top and bottom (at grade) of all retaining walls shall be shown on the grading plans. Retaining walls four feet high, from the bottom of the foundation to the top of the wall, or greater require a building permit. Plans shall be submitted to and approved by the Building Department prior to construction.

SITE PLAN – CIVIL

1. Please adjust the heading to conform to standard formatting.
2. The Vicinity Map shall be at a scale of 1"=2,000' and include location and names of all aerial roadways within one mile of proposed construction. Include any major drainageways in this area.
3. Please update the Parker contact information on the cover sheet (see uploaded redline comments).
4. Please label all private driveway/roadway as "Private" throughout the plans.
5. Please include sight triangles in the landscape plan. While the Town does not regulate sight distance for access points along private roadways, it is highly recommended by Town staff that sight lines in accordance with Town standard detail 24 be evaluated by design staff to ensure safe ingress and egress from the property. It is also important to note that sight triangles for private access points onto private roadways is the responsibility of the property owner to maintain.
6. Please note the minimum offset distance of any trees to edge of storm pipe/inlet is 7 feet per SDECM Section 6.3.3.2.

TRAFFIC IMPACT STUDY – CIVIL

1. Final approval of the Traffic Impact Assessment Letter will require the traffic engineer's signature and seal.

CONSTRUCTION PLANS – ENVIRONMENTAL

SP24-062 – Crown Point Advent Health Expansion - 1st Environmental Review, 7-11-24

Please note that a **CBMP Cost Estimate** will be **required** and **reviewed** with the Grading Permit after all CBMP comments have been addressed and the final site plan is near approval.

GENERAL COMMENTS (Initial, Interim and Final Plan Sheets)

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1. Please add a general note stating – “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.”
2. Please consider connecting the Stabilized Staging Area (SSA) to the Vehicle Tracking Control (VTC) as shown in the Town’s standard detail. This configuration helps limit the amount of necessary traffic across disturbed areas, further limiting tracking from the site.
3. Please remove the duplicate set of the Town of Parker’s CBMP Legend, General Notes & CBMP Details.
4. Please provide and identify Detention Pond Protection (DP) as a precautionary measure for the two detention ponds.

INITIAL CBMP PLANS

5. Please show jersey barriers or construction fence along the sides of the VTC to ensure use of the entire 50-foot pad.

INTERIM/FINAL CBMP PLANS

6. Provide and identify Erosion Control Blanket (ECB) for all slopes 4:1 or steeper. Specifically, the south side of the proposed expansion.

CONSTRUCTION PLANS – STORMWATER

1. The drainage report that was submitted with the Site Plan Application states the existing orifice restrictor plate will be replaced on both the South Pond B and Southwest Pond A.

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Provide details for proposed improvements to the ponds and location with labels to said ponds on a map within the construction plans.

2. Please provide details for storm structures and provide reference to detail sheet.
3. Please include a Key Map for sheets that consist of plan views showing a portion of the overall site.
4. Drainage easements granting the Town legal access to all stormwater facilities located outside the public right-of-way is a requirement to ensure proper construction and maintenance (excluding landscaping and roof drains). Easements by separate document may be necessary when drainage facilities are proposed to be constructed on previously platted parcels. Please see Table 2.8 of the SDECM for proposed easement requirements. Please show existing and proposed drainage easements. Existing drainage easements should include reference to reception number.
5. Please see Table 6.3 of the SDECM. Laterals from inlets must be minimum 18" RCP.

DRAINAGE REPORT

1. Please use latest NOAA Atlas 14 point rainfall values for Town of Parker in Hydrology calculations and provide reference to the data used in this report. Parker is in the process of updating the SDECM to reflect this in requirement.
2. Please use the latest MHFD recommended imperviousness from the latest version of Table 6-2 and 6-3 of the USDCM_Volume_1 for updated basins.
3. Please describe Offsite Basins, relative drainage patterns and why they are excluded.
4. Please clarify whether this workbook calculation (see redline comments) includes offsite basins.
5. The minor and major storm event ratio of peak outflow to pre-development flow should be closer to 1. (See redline comments)
6. Please help staff understand the purpose for multiple detention storage calculations submitted with inclusion and exclusion of off-site basins. Please clearly indicate which of the proposed calculations for orifice plate modification corresponds to what is proposed to be constructed and provide details that align with the proposed orifice plate configuration in the construction plans.
7. Please evaluate the design calculations of modified Pond B accommodates the 1-foot of freeboard requirement.
8. The minimum required freeboard for detention facilities is 1.0-foot above the computed water surface elevation assuming the outlet is blocked and the emergency spillway is conveying the future development 100-year undetained discharge (or the maximum design flow, whichever is greater).
9. Please provide a summary table of results for inlet capacity and ponding depths with inlet labels. The results from the graph appear to differ significantly from what is shown in StormCAD results. (See redline comments)

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10. Please clarify if this is a duplicate analysis for 100-YR of StormCAD results or if this is the 5-YR design storm analysis. (See redline comments)
11. Please provide design calculations showing adherence to spread width and depth criteria for storm runoff at inlets. Please see Table 2.4 and 2.5 for allowable use of streets for initial and major storm runoff. Please use the MHFD inlet capacity and spread calculations workbook.
12. Please include a Key Map for maps that consist of plan views showing a portion of the overall site (see redline comments).
13. It would be helpful to schedule a virtual meeting or phone discussion to help clarify some items in the drainage report to help staff better understand the design and the intent of some of the calculations within the drainage report. Please reach out to setup a time for discussion. (Email Charles at ckudlauskas@parkerco.gov)

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.

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.