



Your kind of place.

Memorandum

To: Amber Wood Hicken, Planner I

Date: December 12, 2022

From: Michael Walton, P.E., Senior Development Review Engineer

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

Subject: SP22-089 Parker Pointe F1 L13 - McDonald's Site Plan – 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 Documents	October 2022
Site Plan	October 2022
Traffic Impact Study	July 2022
Drainage Report	July 2022

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 note that the key map appears to reference the incorrect location of the site.
2. Regarding the RIRO access point proposed on Napa Avenue, the Town would prefer that the median within Napa Avenue be extended east through the access point to restrict left turns. This would allow the small islands to be removed from the proposed access. Please coordinate this with the master developer.

December 12, 2022

3. Are two full access points necessary along Declan Drive. Please discuss potential safety impacts and necessity of the access points further with Town Staff.

SITE PLAN – CIVIL

1. Provide and identify all necessary sight triangles on the landscape plan in conformance with the town’s standard detail 24. If the sight triangles fall outside of the ROW at any point, additionally provide and identify all necessary sight line easements on the landscaping plan.

TRAFFIC IMPACT STUDY – CIVIL

1. While the traffic conformance letter shows a significant increase in traffic from the assumptions of the original master study, it is the Town’s belief that the master traffic study for the development should be revised to better reflect the desired uses for the site. The developer has indicated that they will perform this analysis, which would suffice for the traffic analysis for this Site Plan. However, please note that should the developer fail to perform this analysis, this conformance letter will be required to be expanded to analyze the impacts of the traffic in excess of the current master study.

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.

CONSTRUCTION PLANS – ENVIRONMENTAL

GENERAL COMMENTS

1. Please add “No Work Area” shading and call outs on all adjacent properties to site.
2. Please note that perimeter control should be Construction Fence (CF) when upstream of proposed disturbance and Silt Fence (SF) when downstream of proposed disturbance. Replace the CF along the east, west and south sides of site with SF.
3. Provide and identify that a minimum of 2 Portable Toilet Protections (PTP) will be required for the site.

INITIAL CBMP PLANS

4. Please ensure the Vehicle Tracking Control (VTC) block adequately encompasses the minimum dimensions required by the Town’s standard detail. Please include dimensions as well for the block to ensure these dimensions are not inadvertently overlooked by the

December 12, 2022

contractor. Please also provide a means of perimeter control (Jersey Barriers, Silt Fence, Construction Fence) along the extents of the VTC to ensure the full length of the control measure is utilized during construction.

5. Provide and identify a minimum of 2 Rock Sock (RS) protections in the curb line along the downstream extents of Declan Drive from the Vehicle Tracking Control (VTC).
6. Please note that a Building Permit will be required for the Job Site Trailer.

INTERIM/FINAL CBMP PLANS

7. Bring all Initial CBMP labeling, blocks, and linework to the front of the draw order. Please also ensure that labeling is clear and not overlapped by the Interim/Final CBMP labeling, blocks, and linework. Adjust symbols so the oval is large enough to have letters inside, hard to read.
8. Remove the roadway striping arrows from the plan sheets to avoid confusion with the flow arrows.
9. Utilize the Town's four standard inlet protection types from the Town's standard details for all instances of inlet protection proposed. Provide unique blocks and labeling for each type of inlet protection utilized and ensure all blocks are properly placed to reflect the layout of the standard details provided. Please note that the inlet protection type Inlet Protection for Area Inlets Not in Pavement (IPAN) is the incorrect type for the curb inlets.
10. Provide and identify Sediment Control Log (SCL) along the full extents of top back of curb and along the full extents of sidewalk which falls adjacent to landscaped areas. Please also ensure that adequate labeling is provided for the SCL proposed on the plans.
11. Provide and identify Debris and Trash Control (DTC) for the interim phase along all proposed paved driving surfaces internal to the site.
12. Provide and identify Erosion Control Blanket (ECB) for any proposed landscaped areas with slopes steeper than 4:1. Specifically, some of the proposed native seeding areas appear to be missing the appropriate ECB protection.
13. Add the following note to the final CBMP plan sheets: "LOT PROTECTION (LP) IS REQUIRED ON COMMERCIAL LOTS WHEN LANDSCAPING IS NOT POSSIBLE."

CONSTRUCTION PLANS – STORMWATER

1. Provide and identify a drainage easement for the inlet and storm sewer proposed in the northeastern corner of the site.
2. Extend the proposed drainage easements a minimum of 7-feet beyond the edge of any storm sewer infrastructure.
3. Provide labeling for the drainage easement in the plan view for every plan and profile.
4. Provide the minor and major storms' hydraulic grade line on all storm sewer profiles.

5. Provide unique labeling for each storm sewer structure proposed (ie. MH 1, MH 2, Inlet 1, Inlet 2). Please ensure this labeling is provided in both the plan and profile labels for the structures to provide a point of reference between the two.
6. Provide all existing inverts in and out of all existing storm sewer structures as well.
7. The depiction of several structures in profile view noted to show the bottom of structure falling above bottom of pipe. Please revise to show bottom of structure below bottom of pipe to avoid potential confusion in the field.
8. SHT C1.10: Adequate 18-inches of cover not provided between the water line and storm sewer in the storm sewer east profile. Revise to provide a minimum of 18-inches of vertical separation.
9. that the structure can accommodate both pipe penetrations if a box base structure is used. Please also consider changing the connection point into the inlet if a box base manhole is used due to the excessive angle the pipe will need to enter the structure on the front face requiring an excessively large penetration in the box.
10. SHT C1.11: Provide a minimum of a 0.2-foot drop between any invert into a structure and the invert out of the structure.
11. SHT C1.11: Please note that the western most Type R inlet is proposed along a curb line which does not appear to accommodate the appropriate length for the throat of the inlet or the necessary curb transition into the throat. Please revise to ensure that adequate curb length is provided along the inlet throat to accommodate both.
12. SHT C1.12: Provide a minimum of a 0.2-foot drop between any invert into a structure and the invert out of the structure.
13. SHT C1.12: Two inverts out noted for the proposed manhole structure. Revise pipe network coding to reflect the appropriate direction of flow.
14. SHT C1.12: Minimal clearance noted for the proposed dry utilities. Please note that the Town does not regulate these clearances, but the design engineer is advised to coordinate with the utilities' designated authorities to ensure the proposed vertical clearance is acceptable for these cases.
15. SHT C1.14: Provide a minimum of a 0.2-foot drop between any invert into a structure and the invert out of the structure.
16. SHT C1.15: Two inverts out coded into the manhole structure on storm sewer west profile. Please verify and revise pipe network to show the appropriate orientation of flow. Please also note that as currently proposed in the profile the pipe appears to flow in the wrong direction.
17. SHT C1.15: There does not appear to be adequate horizontal clearance within the downstream manhole in the storm sewer south profile to accommodate both pipe connections as shown. Please verify proper horizontal clearance is provided to accommodate both penetrations.
18. SHT C1.16: Provide a minimum of a 0.2-foot drop between any invert into a structure and the invert out of the structure.

December 12, 2022

SITE PLAN – STORMWATER

1. Provide labeling for the proposed drainage easement on the landscaping plans.
2. Provide a minimum of 7-feet from any existing or proposed tree to the edge of any existing or proposed storm sewer infrastructure.

DRAINAGE REPORT

1. Please note that the application references Lot 13 which appears to reflect the lotting in the original master report, but this report references Lot 7. Please verify the correct lot name is being utilized within the report.
2. The report references basins L13, IN1, and U2 from the master study. Please note that at least a portion of L14 is also included within the newly proposed lot extents. Please include L14 within the narrative discussion and provide an updated existing delineation of said basins within the appendix utilizing the impervious assumptions from the master study.
3. Please reference the allowable gutter capacities as noted in section 2.5.1 of the SDECM in the Gutter Capacity section of the narrative.
4. Please note how the impervious values are less than that proposed within the master study in the Permanent BMP Plan section of the narrative and thus the site meets the Tier 3 PBMP requirements of the criteria.
5. Please note that a minimum velocity of 3-feet per second is recommended for the minor storm event within storm sewer systems to help promote a self-cleaning system. Please evaluate potential opportunities to increase the velocity within the system for the minor event as feasible. If excessive slopes are required to achieve these velocities, please disregard this recommendation.
6. Provide 100-year event flex tables from the StormCAD results for review with the next submittal.
7. Excess capacity appears to be available in all proposed inlets based on the inlet calculations provided. Please consider potential opportunities to consolidate drainage areas and decrease the number of structures provided. This will decrease initial construction cost and help lessen future maintenance costs as well.
8. Please note that the master report identifies a Type R inlet just north of the intersection of Napa Avenue and Declan Drive. Please verify whether this inlet is still proposed as part of the master development, and if so please ensure to incorporate this inlet into the basin delineations as the basins proposed along Declan do not match those shown within the master study.
9. Once the basin extents are verified in response to the comment above, please extend the RD1 basin to the full extents of basin U2 from the master report and then combine basin RD1 with basin OS2 and provide updated inlet calculations for the downstream receiving infrastructure.

December 12, 2022

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.