Comments Response Letter

Utilities

Construction Drawings

1. Water

a. Waterlines to fire hydrants must be a minimum of an 8-inch (section 1100-2-1.05.B)

-The comment has been addressed.

b. We need to discuss the water tie-in to the 2-inch on Reynolds Road. To obtain satisfactory fire flows the project might need to tie to the 8-inch on the east side of Reynolds Road.

- We can make sure the proposed main will have required fire flow from a hydraulic analysis. We are required to have the existing pressure and flow data from city.

c. Make sure to maintain minimum clearance from the existing sewer line.

-Minimum clearance from the existing sewer line has been maintained

d. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for water lines.

-The note has been added to the updated plans.

e. Show encasement for water line where it crosses under the storm drain at the pond.

-The encasement has been provided under storm drainage.

f. Add a note that states "ALL WATER LINES CROSSING UNDER ANY STORM DRAIN, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN."

-The note has been added to the plans.

2. Sanitary Sewer

a. Provide a detail

-Details have been added. See Sewer detail sheet (C-3.3)

b. Correct Note #6 to replace " ... any other parallel utilities or structures." with " ... any other parallel utilities (except for potable water lines, see note 8) or related structures."

-The note has been corrected.

c. On Manhole A-1 provide details for the connection and show how flows are going to be directed to the north. Details need to meet City of Bryant specifications.

-Manhole A-1 will be a doghouse manhole on the existing sewer line.

d. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for sewer lines.

- The note has been added.

Streets

1.On the inlets show the length of the opening in the notes for the curb inlets.

- The note has been added.

2. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for streets and storm drainage.

- The note has been added.

3. Show flared end section on the profile.

-The flared end section has been shown on the profile.

4. Add general notes to the Drainage Plan & Profile drawing to indicate compliance with Bryant's standard specifications and also the Bryant Stormwater Manual.

- The note has been added.

StormWater

1. Add general notes to the Drainage Plan & Profile drawing to indicate compliance with Bryant's standard specifications and also the Bryant Stormwater Manual.
   - The note has been added.

2. Provide a stormwater management plan
   - Stormwater Management Plan has been provided.

3. Provide a SWPPP

   -A SWPPP will be provided

Engineering General Comments

1. Submit engineering review fee.
   - Fee will be provided

2. Drawings are mis-numbered, correct and re-submit

   -The comment has been addressed

Preliminary Plat

1. Show fire hydrants
   -Fire Hydrants have been shown on the plat.

2. Show tie ins for sidewalks on Reynolds Road

   -The comment has been addressed

3. Show finished floor elevations for those lots closest to the pond. See note 1 in Engineering comments.

   - The elevations have been shown in the updated plat

Construction Drawings

1. A minimum of two (2) feet of freeboard is required from the design water surface elevation of the detention basin to the Finished Floor Elevation of any adjacent structure. (1000.5.4)
   The comment has been addressed

2. Provide typical detail for curb and gutter.
   The detail has been provided. See sheet C-3.3

3. Provide typical detail for curb inlet.
   The detail has been provided.See sheet C-3.3

4. Drawing C1. 1
   a. Show detailed grading elevations in the detention basin
      -The elevations have been shown in the updated grading plan.
   b. Show elevations of the trickle channel
   - The elevations of the trickle channel have been shown
   c. Show elevations of the corners and drainage slopes towards the trickle channel.
      - The comment has been addressed.
   d. Show layout information for detention pond
      - The comment has been addressed.

5. Drawings C6.1 thru 6.3 - Erosion Control Plan

a. If using proposed detention basin as sedimentation basin during construction, provide details.

- The comment has been addressed.

6. C-6.0

a. Show layout information for the detention pond. Show dimensions to the location of the weir.

-The information has been provided.

b. Provide horizontal and vertical control information on the pond.

- USGS Type-C gauge will be provided at the pond outlet structure.

c. Provide typical cross section for concrete trickle channel.

- A typical section has been added for the concrete trickle channel: a 3'-0" wide by 6" deep V-ditch with 3:1 side slopes, 6" minimum thickness of 3,000 psi concrete

d. Show longitudinal slope for concrete trickle channel and demonstrate how a minimum flow velocity of 2 fps will be achieved.

-The trickle channel runs 135' from the FES invert (393.12') to the weir (392.50') at a longitudinal slope of 0.46%. Using Manning's equation (n = 0.013, 6" deep V-ditch with 3:1 side slopes), the velocity reaches 2.0 fps at a flow depth of 0.28' (Q = 0.46 cfs) and 3.0 fps at full depth.

e. Show flowline elevations and grades on the trickle channel.

- The comment has been addressed.

f. Add a curve to the trickle channel where the point of intersection shows a sharp turn.

- The curve has been added to the channel

g. Show slopes on the berm for the detention pond

-The slopes have been shown in the updated plan

h. Top of embankment shall generally be at least 2 feet above the top of the outlet structure. (1000.2.1)

- We have maintained required free board.

i. Show 4.5' width in weir structure. (based upon width shown in calculations)

- The comment has been addressed.

j.Add comment to address safety features/fencing around detention basin when completed. (1000.7)

-The comment has been addressed.

k. Add details for fencing

-The details have been provided. See sheet C-3.3

l. Provide construction details of the proposed weir, including the reinforcement, toe downs for scour protection, footers, wingwalls. The elevation and plan views shown does not reflect the elevations shown for the pond. Show full extension to the toe of the pond on both sides of the berm.

-The details have been provided.See sheet C-3.3

m. Clarify what the bottom of the detention pond is supposed to be graded at.

-The pond bottom will be gradually graded to 392.5’

n. Provide grade elevations on the bottom of the detention pond.

-The comment has been addressed.

o. Add a note that states that the Engineer of record is responsible for inspections.

-The note has been added.

p. Show construction staging schedule for the detention basin. Detention basins cannot be used as a sedimentation basin during construction.

-The comment has been addressed.

q. Provide specifications for the grouted riprap shown at the outfall.

-The detail has been provided.See sheet C-3.3

r. Add a note about mosquito control

-The note has been added.

s. Add a reference to Section 1000 of the stormwater manual in the DETENTION POND MAINTENANCE PLAN notes.

-The comment has been addressed.

Drainage Calculations

1. In Project Title it should show the actual project title which is "Cottages of Bryant" according to the construction drawings.

-The comment has been addressed.

2. In Project Description provide summary of pre- and post-development drainage conditions.

-A summary has been provided.

3. In Project Description provide information about the project, including what it entails.

-The comment has been addressed.

4. In Project Location provide a more detailed description of the project location.

-Detailed description has been provided.

5. In Drainage Analysis provide more detailed information about how the analysis was performed, what software was used, any assumptions, etc.

-The comment has been addressed.

6. Show how the runoff coefficients were determined (i.e. stormwater manual, calculations, etc.)

-The runoff coefficients were determined using “The City of Bryant Storm Drainage Manual”

7. Show the top of berm elevation in the summary.

-The top of berm has been shown in the pond summary on Sheet C-6.0.

8. Show the high water elevation.

-The elevations are shown in the updated drainage report

9. Show a more detailed description of the outlet control structure to be used.

- A description has been added in the drainage report summary sheet

10. Provide calculations that determine that the 1-ft of freeboard inside the detention basin is maintained during a 100-year event when the weir structures is blocked.

- Freeboard maintained.

11. Show the sub-basins for each curb inlet in the project, along with calculations to support the flows intercepted by each inlet.

-The sub-basins have been shown.

12.Verify the Gutter information on the Inlet Report. So is 0.005 ft/ft, Sw is 0.05 ft/ft, and Sx is shown as 0.02 ft/ft. When I calculate the cross sectional slope it's more than 2%. When I look at the street profile in the plans the slope in the gutter is more than 0.005. Provide a curb and gutter detail in the construction plans so the gutter slope can be determined accurately.

-The comment has been addressed.

Planning

1. Preliminary Plat Subdivision Review and Preliminary Plat stormwater review fees will need to be paid.
   -The fees will be provided.

2. Half-street improvement plans to Prickett Rd? Nothing shown on plat. No plans from crosswalk at Prickett intersection or Reynolds.

- No, we are not proposing any half street development

3. Fire Hydrants not on Plat

- The fire hydrants have been shown on the plat.