



# VILLAGE ACTION REPORT

**PROJECT: Shady Grove Preliminary Plat**

**APPLICANT: Shady Grove LLC**

**PROJECT LOCATION: 2863 County Highway BB**

**REPORT DATE: July 11, 2019**

**PROJECT DESCRIPTION:** The applicant is seeking approval of a Preliminary Plat for the Shady Grove subdivision, which has 57 single family residential lots, 6 multi-family or duplex lots, and 3 outlots. Zoning was approved in April 2019 for the single family lots and outlots conditioned upon the approval of a revised preliminary plat based on the concept plan presented at that meeting. The proposed plat conforms with that concept plan.

**PLAN COMMISSION MEETING: July 10, 2019**

**STAFF REPORT PROVIDED BY:** X Planner, X Engineer, \_\_\_ Public Works

**MOTION:** by Broom (1st), Ratcliff (2nd)

The Preliminary Plat was APPROVED WITH CONDITIONS, with the conditions as follows:

## Planning

1. Lot 18 falls a few square feet short of the minimum 10,000 sq. ft. lot area. Shift the northern lot line further north as needed to ensure that both Lots 18 and 19 comply with minimum lot size and lot dimension requirements.
2. Buss Road south of Morning Star Way is incorrectly labeled as a 66' ROW, while it is correctly labeled elsewhere as a 100' ROW width. Edit or remove the 66' label.
3. Update the signature line or the Village President on Sheet 2 of the plat to show current Village President John Williams.
4. Note 6 on Sheet 1 references Outlot 4 as the site of a lift station. There is no Outlot 4 in the proposed plat. Update the note to reference Outlot 2.
5. Note 7 on Sheet 1 references Outlot 5 as the site of the Koch pipeline easement. There is no Outlot 5 in the proposed plat. Update note to reference maintenance requirements for owners of Lots 1 to 11 and coordinate with the covenants.
6. Note 10 references lots affected by pipeline setback. Update to list the correct lots (Lots 1-11 and Outlot 2).
7. Note 13 on Sheet 1 references Lots 4-6 and 8-12 having a 34.5' setback. Based on previous lot numbering it appears this note should apply to Lots 52-55, 58, 60, and 61.
8. The title block on Sheets 1 and 2 references the 'City of Cottage Grove.' The title block should name the location as the 'Village of Cottage Grove.'
9. Resubmit the neighborhood covenants dated 10/19/17 with the following updates: a) update the lot numbers in the title, b) rewrite section 8.4 pertaining to the maintenance of the Koch pipeline easement (formerly in an outlot, now located on lots 1 to 11 and Outlot

- 2, and c) update section 8.5 to update the lots that contain part of the CARPC designated environmental corridor.
10. The following information shall be added to the plat: a) information about the proposed land use and zoning shall be added to the plat per 274-25(B) and (P), b) contours shall be added to the plat per 274-25(D), c) proposed building lines/setback lines shall be added to the plat per 274-25(Q), and d) approximate depth to groundwater per 274-25(U).
  11. Show the boundary of the CARPC designated environmental corridors, and update note 12 to correctly list affected lots.
  12. A minimum 4' chain link fence shall be installed by the developer along the entire length of the eastern boundary of the Salem Cemetery.
  13. The amount of dedicated park land in the proposed plat accounts for the dedication requirement for 7 units. A fee in lieu of park land dedication shall be paid by the applicant for the remaining 50 single-family units and any subsequently approved duplex or multi-family units.
  14. All required improvements described by Article VIII of the Subdivision Ordinance shall be detailed and located per the ordinance and to the satisfaction of the Village Engineer and relevant Village staff. Such details shall be included in a developer agreement between the Village and the developer as described by 274-10 of the Subdivision Ordinance.

#### Engineering – Preliminary Plat

1. Provide a table of lots that includes net lot area. All remaining land areas not intended for sewer service or street use will be set into environmental corridor.
2. List minimum building opening elevations and minimum first floor elevations for lots within the plat.

#### Engineering – Master Site Plan

1. Intersection curb for Buss Road and Fundamental Way shall be designed to meet the future back of curb at 30 feet from the dedicated ROW line.
2. Buss Road from Drumlin Ridge to Cottage Grove Road shall be four lane, no parking.
3. Buss Road from Drumlin Ridge to the south shall be two lane with parking lanes for on-street parking.

#### Engineering – Mass Grading Plan

1. Complete Erosion Control Checklist and Land Disturbance Permit Application prior to site disturbance.
  - a. As a part of this process the developer will need to provide an opinion of probable costs for erosion control and stormwater management.
  - b. Developer will need to provide a recorded Stormwater Maintenance Agreement.
2. Disturbance area is anticipated to be greater than one acre. Obtain and provide copy of DNR NOI permit.
3. Storm sewer shall be extended to provide connections for Cottage Grove Road at Buss Road, midblock in up to two locations and at Fundamental Way.

4. Retaining wall will be required on the south side of the bike path along Cottage Grove Road, east of Fundamental Way. Show “future multi-use trail” and retaining wall” on the plan.
5. Refer to the stormwater management comments. Raise the elevation of incoming storm sewer to the main detention basin to 916.0 or greater. This will affect the grading of the main detention basin.

#### Engineering – Plan and Profile Sheets

1. C9.10 – Station 101+14 shall be the high point in the watermain at the hydrant location. Adjust the watermain profile.
2. C9.11 and others. Align the force main note with the pipe in profile view. Please verify the purpose of the added depth selected in the design. Typically, seven to eight feet of depth is adequate with verification of sewer and lateral crossings.
3. C9.12 – MH A-1, provide an additional outlet invert and one pipe length of 18 feet as a future outlet at 0.40% to the south. Install a plug in the manhole.
4. Provide information on private utility crossings and street lighting locations as they become available and prior to plan approval.
5. The developer will fund the LED street lighting as supplied by Alliant Energy.

#### Engineering – Street Cross Sections

1. No comments.

#### Engineering – Stormwater Management

1. Extend Cottage Grove Road culvert pipe for the large drainageway to a point south of the Cottage Grove Road ROW line. The distance shall allow for a 5 foot bike path shoulder (6:1 max slope) and a 4:1 back slope to the endwall invert.
2. The area between Lot 9 and 10 is a sump that requires protection from fill. Provide a twenty-foot wide drainage easement for the maintenance of pass-through drainage.

#### Engineering – HydroCAD modeling

1. Off-site areas:
  - a. The HydroCAD modeling includes 135.7 acres of off-site area to the north. Rate control comparisons are made inclusive of this area, and the large flows coming off this area are overwhelming the contribution of on-site runoff and obscuring the effects of proposed detention facilities. For example, 1 year peak flows from the 135.7 acre north off-site area are predicted to be 67 cfs; yet cumulative flows from the entire 146.7 acre area discharging to the wet is only 68 cfs. Additionally, the north off-site area is actually closer in size to 164.3 acres and does not include only agricultural land, but 28.8 acres of development associated with Westlawn Estates, 4<sup>th</sup> Addition. Modeling of conveyance facilities responsible for passing regional flows through site should include off-site areas, modified as above. MSA can provide regional watershed boundaries as well as model data for the Westlawn subdivision. Modeling for demonstration of on-site rate control should include only the (entire) development site plus off-site areas passing through proposed BMP's.

- b. Off-site areas to the east are handled differently under the existing and proposed conditions. Off-site (sub)watersheds should be evaluated under both existing and proposed conditions in identical ways so as to prevent unintentional changes in runoff rates/volumes due to aggregation of model input data.
  - c. The southern ½ of CTH BB east of Fundamental Way drains to the roadside ditch and comes onto the project site. This is not accommodated in either existing or proposed conditions. Additionally, while the Village has plans to improve CTH BB to a curb and gutter cross section which would eliminate overland flow to the roadside ditch, the previous plans for this project had accommodated collection of runoff from at least a portion of this road.
- 2. Landlocked area. Additional detail should be provided for the partially landlocked basin within subwatershed B. The precise bottom elevation and overflow elevation should be identified and existing conditions modeling revised to include the effects of this storage area which may reduce low flows from this area to near zero.
- 3. Selection of runoff curve numbers:
  - a. Soil maps show the study area to be predominantly HSG B soils; with only a small portion of HSG C soils on site; however, off-site areas to the north are modeled as containing cropland with a runoff curve number of 78 which corresponds to HSG C soils. Additionally, there is no accommodation for HSG soils on site.
  - b. Subcatchment A-4 under proposed conditions is classified entirely as cropland; however, only a small off-site portion is cropland. Other land uses include residential land (on and off site) and areas where the infiltration basin will be constructed (off-site areas should be separately modeled per comment 1 b above).
- 4. Calculation of times of concentration:
  - a. There are several instances where times of concentration are based on very long sheet-flow paths. Post-development subcatchment A-4, A-6, and B-1 include 300 feet, 42 feet, and 260 feet respectively. Sheet flow lengths should not exceed 100 feet.
  - b. Post-development subcatchment B-2 contains no sheet flow component, beginning with shallow concentrated flow.
  - c. Pre-development subcatchments 5S (off-site North), and post development subcatchments A-2, A-3, and A-5 all manually entered values which need to be explained.
- 5. Pond overflow weirs. Are all modeled in HydroCAD as sharp crested weirs.

#### Engineering – WinSLAMM Modeling

- 1. Off-site areas. Off-site areas need to be modeled as separate sources areas 'treated' by another device such that TSS and TP loads are reduced to zero. On-site practices need to be shown to achieve appropriate reductions for site-generated TSS and TP loads.
- 2. TP-modeling. Total phosphorous pollutant loads should be turned on in the model to verify that the site achieves necessary TP reductions in accordance with Village Ordinance standards.
- 3. Infiltration Basin Outlet Pipes.
  - a. The infiltration basin is modeled as having the primary outlets at the basin bottom (i.e. no 'infiltration storage'). Because of the limitations in the model's calculation routine, this is almost certainly resulting in an overestimation of infiltration performance.

- b. The infiltration basin model input data does not include the dual 18" pipes at elevation 915.5 (6" above pond bottom).

#### Engineering – Wet Pond Design

1. The low-flow outlet for the OL2 wet pond is to be installed at elevation 912.0 – which is below the floor of the downstream infiltration basin which is set at elevation 915.0. The effective normal water level for the pond will then be controlled either by infiltration or by the elevation of the lowest gravity outflow pipe from the infiltration basin which is elevation 915.0. This will have large effect on the water quality and rate control performance of the wet pond and it is likely to cause more frequent overflows of the wet pond containment berm.
2. The construction plans include a 'secondary outlet structure' which suggests that there will be two outlet risers; which isn't supported by other plan data or modeling.

#### Engineering – Infiltration/Biofilter Design

1. Construction details (and modeling) for the biofiltration basin shows only 0.5 foot of engineered soil, which is less than the minimum 2 feet required by WDNR Conservation Practice Standard 1002. Additionally, the placement of the underdrain within the cross-section puts it within the engineered soil, as opposed to within the rock storage area where it should be. This further reduces the effective depth of filtration provided by the engineered soil.
2. The construction detail for the biofilter makes it appear as though there is a depth of infiltration storage, however, invert data provided indicates that the primary outlet pipes will be on the bottom of the infiltration basin.

#### Engineering – Lift Station & Forcemain

1. Lift station and forcemain shall comply with all provisions of Section 505-519 of the Village of Cottage Grove Standard Specifications for Public Works Improvements (called standard specifications herein). The review included herein does not comment specifically on all requirements included in that section. Plans shall provide enough detail to verify that they are consistent with the standard specifications.
2. 12" Grinder pumps are not acceptable. Pump shall be a non-clog submersible pump as specified in Section 506.2.2 of the standard specifications. Pumps shall be resistant to clogging/plugging due to non-woven wipes; recessed/vertex impeller, single-vane back-swept impeller (e.g. Flygt N-impeller) or similar. Recommend a full size impeller with minimal or no trimming to limit gap between propeller and volute.
3. Provide all start-up commissioning services as specified in Section 506 of the standard specifications.
4. A field pump test (i.e. drawdown test) shall be completed by the contractor and witnessed by the Village Engineer. See 506.3.4.
5. Electrical (power, instrumentation, and control) design is incomplete. Provide one-line diagram, P&IDs, electrical site plan, and network/telemetry architecture drawings. Plans shall complement the Section 507 through 516 of the standard specifications.
6. Generator plan is incomplete. Design information shall be shown on drawings requested in Comment #6. Generator shall be Cummins to match Village's generator fleet. Automatic transfer switch and associated control shall be provide for standby generator.

7. Confirm power supply is compatible with specified pumps.
8. The vertical 4" pipe with flanged connection in the wet well is not acceptable. Provide a tee (or cross) in valve vault with extended flanged pipe. Flanged pipe shall be equipped with quick connect for connection to Village-provided trash pump stationed at grade. Vault door shall be located above quick connect for easy access from surface without vault entry. See Section 506.3.1(C).
9. Provide an odor scrubber on the end of the vent pipe. Syneco Systems Peacemaker vent scrubber, or equal. Provide a spare case of scrubbers to the Village.
10. A minimum wet well diameter of 6 feet shall be provided for adequate maintenance access. In addition, fall protection (i.e. safety grating) is required. This will require a larger hatch frame in order to maintain the same clear opening identified on the plans. There needs to be a minimum of 12" clearance between the corner of the hatch and the edge of the concrete manhole top/edge. Therefore, a > 6 foot diameter top is necessary.
11. Provide fire hydrant and adequately sized hydrant lead in lieu of 3/4" yard hydrant shown.
12. Steps into wet well are prohibited (Note #6, Sheet C14.0)
13. Epoxy coated steel pipe supports shall be utilized in all locations (wall and floor).
14. Valve vault drain design is unacceptable as the stainless steel flap valve does not provide effective barrier for sewer gases migrating to the valve vault. At minimum, pipe should be extended in the wet well to below the low water level to provide a hydraulic break to minimize gas migration. It is recommended, that the pipe be cast into the valve vault base, and terminated in a center sump. In addition, it is recommended that a ball valve be cast into the base as well as with an access cover.
15. Warning sign is unacceptable. Sign shall comply with Section 506.2.10(2) of the standard specifications.

Conditions added by Plan Commission

1. The precise location, type, ownership, and maintenance responsibilities for the cemetery fence (see planning condition #12 above) shall be fully defined in the Developer Agreement.
2. There shall be a mid-block cross-over or the median shall be shortened at the south end of Buss Road.

**VOTE:** 4 Aye, 0 Nay, 0 Abstain

**APPLICANT COMMENTS:**

- (Robert Procter – Developer’s attorney) – provided an overview of the project; noted that the zoning for the single-family parcels was previously approved on the condition that a preliminary plat be approved that is substantially similar to the concept presented at the time the zoning was approved; the proposed plat is substantially similar with the only difference being that the Buss Road ROW has been expanded to 100' width at the Village’s request; noted that only 6 single family building permits have been issued in the Village so far this year; stated that the development team agrees with all of the conditions in the staff reports.

### **PUBLIC HEARING COMMENTS:**

- (Jeannine Alexander) – noted all of the engineering conditions; why not wait until conditions are worked out before approving? Maloney noted that the type and number of conditions is not unusual for a conditional approval of a preliminary plat. Everything will need to be worked out for the final plat approval.
- (Steven Bork) – owns the property immediately south of Shady Grove. When will the continuation of Buss Road and the bike path be completed, now it seems like a road to nowhere? Ratcliff stated that would be the responsibility of whomever develops his property, if that happens.
- (Jane Wing) – lives on Buss Road. Will Buss Road be offset at BB? Maloney replied that it will not. The MGSD traffic study indicates warrant for traffic signals will be met when school is built. Reconstruction for signals (or possibly roundabout – to be determined based on preference of participating entities) will address offset.
- (Laura Miller) – lives on Buss Road. Will existing Buss Road north of BB be expanded as part of Shady Grove? Will there be sidewalks on the west side of Buss in the existing Town subdivision? Maloney replied no regarding the expansion, except for what is required for the intersection improvement. The rest will occur with other development. There probably won't be sidewalks along the Town subdivision unless the Town and residents want them.
- (Darcy Ellestad) – lives on Buss Road. What will the speed limit be on Buss Road, north of BB? Maloney replied that the Village uses two speed limits: 35 mph and 25 mph. This area would likely be 35 mph with a school zone near the school. Ellestad supported this as she feels its currently too fast.
- (Sharon LeMercier) – lives on Damascus Trail. How wide are the streets in Shady Grove? Are they large enough to park on both sides? Tomas Toro, the developer's engineer, replied they are 36 feet from curb face to curb face. Maloney replied this is a typical dimension in the Village and can easily accommodate parking on both sides.

### **PLAN COMMISSION COMMENTS:**

- (Ratcliff) – can the fence be coated in black? Toro replied that it can – that is a vinyl coating that tends to wear off after 10 years or so exposing the galvanized metal below. It's unclear at this time who would maintain the fence after that period.
- (Jushchyshyn) – who owns the fence? Consensus that type, location, ownership, and maintenance responsibilities will be determined for the final plat and defined by developer agreement.
- (Jushchyshyn) – the median on the south end of Buss prevents lots on the west side of the street from turning north out of their driveway. Is there adequate room at the south end to u-turn back north? Discussion by Maloney and Toro determined that the median can be shortened or there could be cross-over through the median mid-block. Preferred option will be determined for the final plat.
- (Ratcliff) – if Buss Road is extended south into the next property, will the gap in the median remain? Maloney responded that it probably would to provide a mid-block cross-over at that location.

### **STAFF COMMENTS:**

- See planning staff report and as noted above.