



ENGINEERING AND RESOURCE PROTECTION REVIEW COMMENTS
Williamsburg Landing, Inc. – Woodhaven Expansion
COUNTY PLAN NO. SP – 104 – 15
December 3, 2015

General:

1. A local Land Disturbing/Stormwater Construction Permit (VESCP/VSMP authority permit) and Siltation Agreement, with surety, are required for this project.
2. Stormwater Inspections. This project includes stormwater conveyance and/or stormwater management facilities. Completion of a Stormwater Facilities Data Sheet and payment of Stormwater Facilities Inspection Fees may be applicable prior to issuance of a local land disturbing/stormwater construction (VESCP/VSMP authority) permit. For more information, contact the James City County Engineering and Resource Protection Division at (757) 253-6670.
3. Treasurer Certification. Please note that before accepting a local land disturbing/stormwater construction (VESCP/VSMP authority) permit application for this project, certification from the James City County Office of the Treasurer is required. County staff will verify that all real estate taxes owed for subject properties have been paid in full in accordance with Section 24-24 of the County Subdivision ordinance (Ordinance 31A-247). To check status, contact the Treasurer's office at 757-253-6705.
4. A Standard Declaration of Covenants – Inspection/Maintenance agreement is required to be executed with the County due to the proposed stormwater conveyance systems and/or stormwater management/BMP facilities associated with this project.
5. A Geotechnical Report, prepared by a professional engineer, is required to be submitted for stormwater management/BMP facility designs prior to issuance of a local land disturbing/stormwater construction (VESCP/VSMP authority) permit for the project. This applies to both #2 and #6.
6. Record Drawing and Construction Certification. The stormwater management/BMP facilities and associated stormwater conveyance systems as proposed for this project will require submission, review, and approval of a record drawing (as-built) and construction certification prior to release of the posted bond/surety. Provide notes on the plan accordingly to ensure this activity is adequately coordinated and performed before, during and following construction in accordance with current County guidelines.
7. Record Drawing and Construction Certification. Provide an individual boxed and bold note on the cover sheet of the application clearly indicating that all work is to be observed by a qualified licensed professional and that prior to the release of related posted bonds and surety, record drawings and construction certifications must be provided to, and approved by the James City County Engineering

and Resource Protection Division and shall be consistent with the Stormwater Management / BMP Facilities Record Drawing and Construction Certification Forms.

8. CCTV Post Installation Inspection. An internal CCTV post installation inspection, performed by the operator, is required for all stormwater conveyance system pipes, access or inlet structures and culvert of 15-inch nominal diameter size or greater as part of the construction record and construction certification process. CCTV inspections shall be submitted on cd for staff review. Refer to Section 8-27(e) of the County's Chapter 8 ordinance. Given the relative newness of this requirement, please include verbiage on the cover sheet addressing this need.
9. Interim Certification. Due to the characteristics and dual purpose function of the Sediment Basin/BMP #6 interim construction certification will be required. Refer to current County guidelines for requirements.
10. P2 Plan. A pollution prevention plan (PPP or P2 plan) is required to be submitted for review and approval by the County prior to registration for a state VPDES construction general permit. Refer to Section 8-26(c) of the County's Chapter 8 ordinance. This plan shall become part of the on-site SWPPP documentation.
11. Plan Number. Please reference the assigned County plan number on all subsequent submissions. The number is SP-104-2015.

Impervious Cover:

12. Site Data Section.
 - a. The currently approved version of the Master Stormwater Management Plan (SWM-001-14) has the entire site area listed as 72.90. Site Data should list all portions/ parcels of the site such that the total is 72.90. A separate listing of the subject parcel, as presented, is acceptable with the following adjustment.
 - b. The *Total Existing* impervious cover shown on the plans seems to be the total amount previously approved on the SP-0037-2010 plans. The entirety of that plan was not constructed. Therefore, provide the *actual* total existing impervious cover, then the amount previously approved, and finally the amount proposed with this submittal.

Chesapeake Bay Preservation:

13. Environmental Inventory. Show the Natural Open Space easement, instrument # 110015345 on the overall and provided environmental inventory plan sheets.
14. RPA Signs. Include provisions on the plan for installation of signs identifying the landward limit of the RPA and/or Conservation easement. Refer to Section 23-7(c) of the Chapter 23 Chesapeake Bay Preservation ordinance.

Conservation Easements:

15. Change RPA signs to Conservation Easement signs.

Erosion & Sediment Control Plan:

16. Demolition Plan. The plan sheet must include specific erosion and sediment controls related to this work. Indicate location of construction access for tree clearing and riprap removal. Additional controls include, but are not limited to, inlet protection, silt fence and safety fence. Please include note on demolition plan that material is to be immediately hauled offsite, unless being stockpiled for reuse. If the latter, indicate location of such with proper controls.
17. Demolition Plan Limits of Disturbance. Especially in the area of the proposed assisted living building and parking, the limit of work lines do not seem to form closed loops and they meld into the clearing lines. More clearly delineate the limits of work and include the areas of parking marked for strip eradication, as machinery will access those areas. Additionally, the current limit line does not allow for access to the parking area being removed.
18. Continued Site Access. If circular drive is to remain in use during demolition and reconstruction, indicate such and provide necessary traffic notes and controls. SWPPP for project should include verbiage concerning roadway cleaning on a more frequent basis given the use of this site and its patrons.
19. Safety Fence. Use of orange colored safety fence in accordance with VESCH Minimum Standard & Spec. 3.01 of the VESCH is warranted around the site work areas to maintain pedestrian safety. Given the nature of this facility use, chain link or high visibility orange is recommended.
20. Temporary Slope Drain. Please identify location of TSD #2. #1, 3, 4, and 5 are easily identified, but either #2 is missing or is unlabeled.
21. Slope Matting. Please indicate use of matting on graded slope near new parking area along Williamsburg Landing Drive. At this location, also include a slope label.
22. Perimeter E&S Control. There is not an Erosion and Sediment Control plan for the Assisted Living Addition building and related parking areas. Provide the necessary E&S control measures on these areas.
23. Phased E&S Plans. Ensure plans account for total limits of work needed for each phase and more clearly delineate phases and work associated with each. A Sequence of Construction may be warranted for each phase.
24. Downstream BMP #2 Protection. Include provisions on the E&SC plan to monitor the existing BMP for signs of sedimentation, specifically during or as a result of construction on this site. As this facility is not to be used for sediment control, the contractor should be aware that additional onsite or offsite controls may be necessary to protect the BMP from degradation. This may include additional E&SC measures, cleaning and sediment removal within the basin or connecting pipe systems and coordination with the owner, engineer, or the County.

Grading:

25. Roof Drain System. Please clarify if Rim elevations of roof drain cleanouts are to be above grade. If not, please review Virginia Construction Code Section 1808.7.2 regarding the immediate slope from foundation of buildings. The proper fall from building finished grade to rim elevation does not seem to be present.
26. Miscellaneous Sign Symbols. In the area of the crosswalk and handicap spaces in the new parking area adjacent to the assisted living building, there are several miscellaneous sign symbols.

Stormwater Management / Drainage:

27. Existing BMP. As stormwater compliance for the proposed site is intended to be achieved by use of an existing onsite master planned BMP, the provisions of Section 23-9(b)(8)(a) of the County's Chesapeake Bay Preservation ordinance will apply to the project. If compliance for a development is based in whole or part by use of an existing downstream onsite or offsite structural BMP, evidence shall be provided that the facilities are in good working order and performing at the design level of service. Original design computations and/or maintenance plans, or statement from design engineer attesting to adequacy of current pond conditions, may need to be provided to verify this provision.
28. BMP Point System Worksheet. The drainage areas listed for BMPs #1, 2, and 6 differ from those listed on the approved MSWMP worksheet. While the differences may very well be admissible, please explain any increases or decreases.
29. BMPs #1 and 2.
 - a. Full Calculations Needed. As the total areas draining into these facilities have increased with this design, a full set of calculations are needed to verify storage is available for water quality volume and channel protection volume now required. Revisit the drainage area breakdowns to ensure most recent and appropriate impervious numbers are being applied to calculations. Referencing comment #28, the drainage area delineations seem to have shifted slightly.
 - b. Pre-Development Routings. The pre-development areas cannot be lower than those currently listed in the MSWMP worksheet for these facilities. Pre-development conditions must be those at this time in development's existence and not those of initial construction.
 - c. Existing BMP Plantings. Improvements to BMP #2 should account for the replanting of any missing vegetation on its existing aquatic bench.
30. Storm Drain Computations.
 - a. Storm System 1: Line 3 (83 LF of 8") should be adjusted for greater capacity. It is currently just under capacity for the run. Also, the Rim elevations listed for Pipes 49 and 51 are just slightly off from Sheet 9.

- b. Storm System 2:
 - i. A roof leader to this system lies within the DA for 3-11. The same is true for roof leaders within DAs 3-9.5 and/ or 3-10. There seems to be an issue with the delineation lines here.
 - ii. DA 2-4L listed on sheet DA-3 does not match chart in calculations book.
 - iii. Pipe 2-1 to 2-1.1 runs under the roadway and may not be 8". Please upsize to 15".
- c. Storm System 3.
 - i. The FES of the inlet pipe at BMP #2 should be SS3-0 instead of SS1-19, sheet 9.
 - ii. Rim Elevations. Several rim elevations listed on the plans do not match the calculations: Pipes 33, 53.1, 53, 52.1, and 48.1.
 - iii. Pipe 32, Line 5 has a capacity barely meeting total flow. Recommend upsizing this one pipe from 18" to 24".
 - iv. HGL Starting Elevation. Sheet 9 and the BMP calculations list the 10 year elevation as 43.78. The Storm Sewer calculations have 44.65. Once comment 29 has been fully addressed, use the accurate 10 year elevation for the computations.
- d. Storm System 4.
 - i. HGL Starting Elevation. Sheet 10 and the BMP calculations list the 10 year elevation as 59.50. The Storm Sewer calculations have 61.03. Once comment 29 has been fully addressed, use the accurate 10 year elevation for the computations.
 - ii. HGL vs. Rim Elevation. The HGL elevation at various structures is higher than the Grnd/Rim Elev.
 - iii. Relocate Cleanouts. On the west side of the proposed assisted living building, relocate the cleanouts in order to avoid using bends. Additional cleanouts should not be needed and the lines, if trying to avoid placement in the concrete sidewalk, could be angled.
 - iv. Drainage Subdivides. Please review drainage areas map in vicinity of 4-7. There seems to be an unlabeled additional area that encompasses the portion of the existing building roof.
- e. Storm System 5.
 - i. HGL Starting Elevation. Sheet 10 and the BMP calculations list the 10 year elevation as 59.50. The Storm Sewer calculations have 61.03. Once comment 29 has been fully addressed, use the accurate 10 year elevation for the computations.

- ii. SS5-17. Does the listed DA of 1.17 AC include the contribution through the unlabeled pipe entering from Williamsburg Landing Drive?
 - f. Storm System 6. The outlet FES elevation is listed as 0.00 in the calculations.
- 31. BMP #6.
 - a. Pond Drain. Include a pond drain, with valve, for maintenance dewatering needs.
 - b. Rip Rap Outfall Basin. Add note that rip rap shall be underlain by properly entrenched filter fabric.
 - c. Length of Outfall Piping. Review outfall piping design to determine if a shorter run is reasonable. This will allow less clearing and disturbance just upstream of the wetlands. As currently designed, the outfall riprap abuts the wetlands line.