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MEMORANDUM

Date: December 30, 2024

To: Michael Elabarger

From: Jacqueline Thompson, PE

Subject: The Preserve at Moody Farm
CID 24-09 1st Submittal
Town of Rolesville, NC

This memo summarizes the review of the construction infrastructure drawings submitted by American Engineering Associates, dated 12/02/24 (received 12/05/24).

Sheet CVR:

1. The Town of Rolesville project number for this project has been assigned as CID 24-09. Please include this number on the cover sheet of all future submittals.
2. Additional information will need to be provided for a complete review. Please include greenway profiles as well as a storm package with information such as HGLs, gutter spread, and pre-/post-development maps.
3. Provide a north arrow for the vicinity map on the cover sheet.

Sheet C1.0:

4. A few of the adjacent parcels do not show the correct owner/PIN/etc. Ensure adjacent property information is up to date.
5. If the existing dirt drive on the south side of the property is to be removed, it should be indicated as such on the demolition sheet and not shown on other sheets throughout the plan. If the dirt drive, or any portion of the dirt drive, is to stay, it should be shown on all sheets throughout the plan set.

Sheet C2.0:

6. Please update notes A and B under General Notes, as they currently contain conflicting information.
7. Note F under General Notes points to sheet CD19, however there is no sheet CD19 in this set of plans. Please change this to the correct sheet number.

Sheet C3.0:

8. Ensure erosion control follows NCDEQ design criteria. There are areas where the silt fence appears to be handling a decent amount of area without any other erosion control measures. Table 6.62a in NCDEQ's NC Erosion and Sediment Control Planning and Design Manual specifies the maximum areas silt fence can be designed for without adding additional measures. Consider adding additional diversion ditches routed towards the proposed sediment basins.

Sheet C3.2:

9. Grading may not extend beyond the silt fence or limits of disturbance. Please adjust grading and/or silt fence as needed. This comment applies to all erosion control sheets.
10. Please clarify what the line east of SB#1 represents (see markups).
11. Dewatering bag should not be placed in a way that the water will naturally flow back into the sediment basin.
    a. This comment also applies to Sheet C3.3 and C3.4.
12. There is a callout indicating a pipe and structure should be installed, but the pipe and structure are not showing on the plans. Please show the linework related to this callout.
    a. This comment also applies to Sheet C3.3 and C3.4.
13. Specify how access to existing houses will be maintained throughout construction. If the existing dirt drive is to be maintained during Phase 1 of erosion control it should be shown on the plans.

Sheet C3.3:

14. Ensure silt fence outlets are located at low points along the silt fence.
    a. This comment also applies to Sheet C3.4.
15. Adjust the silt fence outlet and rip rap pad leaders by SB#5 to the correct locations.
16. Add silt fence at the edges of construction where stormwater is flowing towards.

Sheet C3.4:

17. Adjust the skimmer and/or baffles in SB#4 so that the skimmer is not located behind the baffle.
18. Please show the rip rap linework at the end of the rip rap pad callout by SB#3.
19. Proposed grading must connect into existing grade.
    a. This comment applies to all sheets where grading is shown.

Sheet C3.7:

20. Please show the linework for the rip rap at the end of the proposed culvert north of SB#1.
21. Baffles should be shown to remain in sediment basins until wet pond conversion.
    a. This comment also applies to Sheets C3.8 and C3.9.
22. Remove inlet protection linework that is not around inlets and provide inlet protection around all inlets that do not have any.
    a. This comment also applies to Sheet C3.8.

Sheet C3.9:

23. Please add additional contour labels northeast of SB#4.
24. Clarify what the line through the southwest corner of SB#2 represents. If it is a contour, it should be adjusted so as not to overlap with other contours.

Sheet C4.0:

25. Ensure the SCM access and maintenance easements are clearly labeled and identifiable throughout the plans. SCM easements should contain the entire SCM and provide a connection to a public R/W.

Sheet C4.1:

26. Provide the bearing and distance on the lot line between Lots 24 and 25.

Sheet C4.2:

27. Impacted wetlands should be shown on the demolition plan and not on any of the other plan sheets.
28. Show linework for the existing driveway on the Benny L. and Connie G. Moody property.
29. Ensure all dimensions are clear and easy to read.
30. Show and label where Mulberry Tree Drive construction begins.

Sheet C4.4:

31. Show and label the required concrete approach to the boardwalks along the greenway trail.

Sheet C4.5:

32. Storm structures collecting road drainage at the intersection of Mulberry Tree Drive and Tansley Crest Loop are shown as being routed to WP#4. Please clarify how will this drainage be dealt with during Phase 1 since WP#4 will be built during Phase 2.

Sheet C5.0:

33. Slopes are not to exceed 3:1 without additional steps taken for stabilization. Slopes of 3:1 or less are recommended.

Sheet C5.1:

34. Ensure all low points are being collected in the proposed storm system.

Sheet C5.2:

35. If grading is to extend onto an adjacent property, a temporary construction easement will be needed, and will be required to be shown on the plans.
36. Extents of headwalls should be clearly shown on plans. Ensure grading does not exceed 3:1 around headwalls.
    a. This comment also applies to Sheet C8.5.
37. The easement around the culvert (HW FES 603 to EW 101) should be extended to include the entire storm pipe.

38. Grading for the parking lot must be shown on plans. Ensure any low points are being collected and routed through the storm system. Spot elevations may be required to help understand the grades/elevation/drainage.
39. Diversion ditch contours should tie in together properly and be kept to 3:1 maximum side slopes.
40. There is sidewalk shown going through the intersection of Rolesville Road and Mulberry Tree Drive. This should be removed and shown as a crosswalk instead.
41. There is grayed back linework shown on this sheet that is not shown on the existing conditions sheet. Please label the linework. If it is to be removed or relocated it should be indicated on the removals sheet.
42. Ensure no low spots are being created without proper drainage structures where Mulberry Tree Drive ties into Rolesville Road.
43. Please indicate how access will be provided to the existing cemetery.

Sheet C5.3:

44. Add contour labels by CB 413. If this area is a high point, are CB 413 and CB 412 needed? If it is not a high point, ensure water is draining towards the structures.

Sheet C5.4:

45. Existing contours should be clear and easy to understand. There are overlapping contours and contours ending in space. Please adjust plans to show the correct existing conditions.
46. Clarify the intent of FES 420. If it is meant to outlet to the SCM, please adjust the pipe and FES accordingly. If not, it is suggested that the outlet be shifted so water isn't directed towards the pond embankment.
47. While there is sufficient vertical separation, minimum horizontal separation between storm and the sanitary force main should be achieved where possible.
48. Adjust proposed contours so that they do not overlap each other.

Sheet C5.5:

49. Ensure pond outlines match those shown throughout the rest of the plans. Drainage areas should include pond extents.
50. Ensure drainage area boundaries match what is shown on the grading and drainage sheets.

Sheet C6.1:

51. Consider the placement of sanitary and water services and how they will actually be installed. Confirm there is enough room in the manholes and between the services/fitting for installation.
    a. This comment applies to all utility sheets.

Sheet C6.3:

52. Where possible, services should be perpendicular to the main/lot.
    a. This comment applies to all utility sheets.
53. Ensure services do not conflict with storm structures.

Sheet C7.1:

54. It appears as if the “Downstream Structure” and “Upstream Structure” table headers have been flipped. Confirm and correct the labeling in the pipe summary tables.
55. Remove the FES rim elevations from the tables.
56. All storm pipes must have a minimum slope of 0.5%.
57. Storm pipes are to meet minimum cover requirements (2’ minimum in paved areas).
58. Ensure minimum drop requirements in storm structures are met. A minimum of 0.1’ is required for angles between 0-45 degrees and a 0.2’ drop is required for angles between 45-90 degrees.

Sheet C9.0:

59. Label tees/valves/etc. in both plan and profile views.
    a. This comment applies to all profile sheets.
60. Ensure elevations at tees line up across all profiles.
    a. This comment applies to all profile sheets.
61. The force main on the Mulberry Drive profile does not match up with the extents shown in the plan view. Ensure linework is consistent between plan and profile.
62. Ensure minimum separation requirements are met and properly labeled.
    a. This comment applies to all profiles.

Sheet C10.0:

63. The Tansley Crest Loop profile has two existing grades showing. Please clarify where the discrepancy is coming from. Ensure the proposed grade is tying into the correct existing surface.
64. Sanitary sewer greater than 12’ deep is to be SDR 26. Final approval of sanitary sewer materials will come from City of Raleigh.

Sheet C11.0:

65. Grade change is not to exceed 3% without a vertical curve.
66. Adjust road grading to ensure K values meet minimum requirements per NCDOT Subdivision Roads Minimum Construction Standards.
    a. This comment applies to all street profiles.

Sheet C12.0:

67. Please adjust VC lengths to be in 50’ increments.
    a. This comment applies to all street profiles.

Sheet L1:

68. Show driveway locations on the landscaping plan to confirm there are no conflicts with plantings.