

October 2, 2023

Town of Rolesville
502 Southtown Circle
PO Box 250
Rolesville, North Carolina 27571

RE: Frazer Farm Park CDs
Case Number: CID-23-05
Response to 2nd TRC Review Comments
2020110039

The following are the response comments for the above-mentioned project. Our response comments are in **bold**.

ENGINEERING

Cover Sheet:

1. The following items will need to be added to the site data table.
 - a. Parking data;
 - b. Impervious area pre-development; and
 - c. Impervious area post-development.**McAdams Response: Site data table has been updated.**
2. Please update the sheet index to correctly correspond with the sheets included in the document.
McAdams Response: Sheet index has been updated.
3. Provide the existing condition sheets with the next submittal.
 - a. C1.00
 - b. C1.01**McAdams Response: Sheets are included with this resubmittal set.**
4. Update the profile stationing to match the profiles shown on the plan and profile sheets.
McAdams Response: Stationing has been updated.
5. Include the Wake County Signature/Approval block on cover sheet, per Wake County Sediment and Erosion control submittal checklist.
 - a. Block detail: Sediment and Erosion Control Standard Details | Wake County Government**McAdams Response: Since this project is being reviewed by NCDEQ this block was not added to the cover sheet.**

Sheet C1.10 Overall Demolition Plan:

6. Please provide the existing condition sheets C1.01 and C1.00 in the next submittal with existing features called out, there are several notes/callouts on this sheet that can be placed on the existing condition sheets.

McAdams Response: Existing conditions sheets are included with this resubmittal set.

7. Provide a label that the archaeological site is to be protected.

McAdams Response: Labels for the archeological sites to be protected have been added to the demo plan.

8. Denote if the utility easement is public or private in all areas where a utility easement is called out, owner included if private.

McAdams Response: Private utility easement and owner have been called out on the plan set.

9. Provide easement label with owner information.

McAdams Response: Easement label with owner information has been added.

10. Please include labels for the existing storm drainage system in these areas.

McAdams Response: Labels for the existing storm drainage system have been added.

11. Please include labels for the existing drainage system with inverts and pipe description, this pipe or structure is included in limits of disturbance.

McAdams Response: Labels for the existing storm drainage system have been added including inverts and descriptions.

12. Clarify the purpose of the green label keep if needed.

McAdams Response: Label has been removed from the plans.

Sheet C2.00 Overall Site Plan

13. The label "Archaeological area to be protected" should be on the existing condition sheets.

McAdams Response: Comment Noted. Call out has been moved to demolition and existing conditions sheets.

14. The hatch provided for the wetland and buffer appear very similar, please adjust to better distinguish between the two areas.

McAdams Response: Hatch has been changed to better distinguish between the wetland and buffer.

15. Prior comment: if parking is to be allowed on streets or drivers in future show street width and revision section. Grading and storm culverts to be revised.

McAdams Response: Per conversations with the town parallel parking is not desired and will not be allowed on the site. "No parking" signage will be added.

Sheet C2.01 Site Plan Area "A":

16. All the areas of pavement look the same. Provide ability to distinguish the transition from the 401-road widening to the heavy-duty pavement section.

McAdams Response: Hatching has been updated to distinguish between the pavement types.

17. Please shift the street width label for ease of reading.

McAdams Response: Street width label has been shifted for ease of reading.

18. Please provide a label or add line typed to legend.

McAdams Response: A label has been added for the limits of disturbance.

19. The town of Rolesville has suggested that parking be added along the street, if that is not the intended plan please indicate "No Parking" signage and the locations.

McAdams Response: "No parking" signage is now proposed.

20. Provide the location and dimensions of the proposed guard rail from the edge of gravel.

McAdams Response: Guard rail is 2 feet off the edge of the gravel.

21. The radius shown into the parking for "future parking lot" is smaller than the minimum standard per Wake County Fire access route. 30' is the minimum (typ). Radius must be approved by Wake County Fire.

McAdams Response: Radii changes were not required per Wake County Fire Department's review of the submittal set. Future conditions are shown for reference only, and full design will

22. There are no curbs or walks called out to be installed in this phase of the project, linework indicated there is to be curb installed.

McAdams Response: Callout has been added.

23. The driveway entrance will need to accommodate truck and trailer access as it will be a parking lot for a future "event center". Hence, both radii will need to be sized appropriately to provide this access.

McAdams Response: A 40' radius has been provided on all driveway entrances from Louisburg Rd. to accommodate intermediate semitrailer trucks. We don't anticipate large or interstate semitrailer trucks serving this site during future events. Radii at internal parking lot entrances to be adjusted during design of future phase if required.

Sheet C2.02 Site Plan: Area "B":

24. All the areas of pavement look the same, provide the ability to distinguish the transition location from the 401–road to the heavy-duty pavement section.

McAdams Response: Hatching has been updated to distinguish between the pavement types.

25. Several centerline radiuses are below minimum length. The centerline radius must be 230' at minimum per LDO and NCDOT road standards. Please revise radii.

McAdams Response: Per conversation with the Town, this road is an interior private road with access to be controlled by gates in the future. Interior park roads are not intended to serve as public through roads and will not be required to meet LDO or NCDOT road standards.

26. Wake County Fire must approve this radius, the minimum is specified at 30'.

McAdams Response: Radii changes were not required per Wake County Fire Department's review of the submittal set.

27. This driveway entrance will need to accommodate truck and trailer access as it will be a parking lot for future "event center". Hence, radii will need to be sized appropriately to provide this access.

McAdams Response: A 40' radius has been provided on all driveway entrances from Louisburg Rd. to accommodate intermediate semitrailer trucks. We don't anticipate large or interstate semitrailer trucks serving this site during future events. Radii at internal parking lot entrances to be adjusted during design of future phase if required.

28. There will be "No Parking" signs at the dead end to provide a fire truck turnaround, add location and label.

McAdams Response: Location and label have been added.

29. In order to match detail sheet, provide proposed handicap/van accessible sign location.

McAdams Response: Sign locations have been added.

30. Due to parking being for a "Future Event Center" this radius is below the minimum for the fire access, Wake County must approve of radius length.

McAdams Response: Radii changes were not required per Wake County Fire Department's review of the submittal set.

31. Please provide detail for the property barricade.

McAdams Response: Detail has been added on sheet C8.01.

32. There are no curbs or walks to be installed in this phase of the project, linework indicates that there is to be a curb installed within the limits of disturbance. Update accordingly.

McAdams Response: Callout has been added.

33. There is no boardwalk or walk to be installed during this phase of the project. Linework indicates that there is to these items installed within the limit's disturbance. Update accordingly.

McAdams Response: Callout has been added.

Sheet C2.03 Site Plan: Area "C":

34. Clarify if this sheet is all future construction, the stationing seems to not correspond to any currently proposed alignment, please provide alignment to go with the stations.

McAdams Response: Linework has been greyed back to indicate future conditions.

35. Several centerline radii are below minimum length. The centerline radius must be 230' at minimum per LDO and NCDOT road standards. Please radii.

McAdams Response: Per conversation with the town this road is an interior private road with access to be controlled by gates in the future and will not be required to meet LDO or NCDOT road standards.

36. Please provide label or include shading in legend on current sheet to denote that this area is a wetland to provide clarity.

McAdams Response: Shading has been updated as per previous comments and wetlands have been labeled to provide clarity.

Sheet 3.00 Overall Grading & Drainage Plan:

37. This parking lot is included in this phase, update label.

McAdams Response: Label has been updated to reflect that the gravel parking lot is in this phase.

Sheet 3.01 Grading & Drainage Plan: Area "A":

38. As per NCDOT Storm Drain Guidelines, the pipe shown is an open pipe at a depth of 1' or less. Hence 18" Class V RCP must be used.

- a. NCDOT guidelines for reference: 2022 Guidelines for Drainage studies and Hydraulic Design.pdf(ncdot.gov)

McAdams Response: Pipe depths have been edited to provide more than 1' of cover.

39. Please provide additional contour labels in this area to clarify if this land is a mound or depression.

McAdams Response: Additional contour labels have been added to the specified area to improve clarity.

40. Reverify grading in this area to have a positive drainage flow.

McAdams Response: Contour labels have been added on existing contours to illustrate drainage.

41. The proposed 368 contour line needs to continue to provide drainage clarity.

McAdams Response: Callout has been relocated to show tie in point for 368.

42. Confirm if this area is being filled, it is within the limits of disturbance.

McAdams Response: Limits of disturbance have been updated to reflect the area being filled.

43. The swale/ditch that is graded appears to be close to the pavement section, within 4' near the entrance ensure that there is proper drainage.

McAdams Response: Ditch location has been updated.

44. The shoulder appears to be cut off shorter along the entrance, reference Roadway Design Manual to size the appropriate cross section.

McAdams Response: 4' shoulder for private drive has been updated.

45. This area is a low point, please provide existing culvert size and invert elevations to better understand drainage.

McAdams Response: Existing culvert callouts have been added.

Sheet C3.02 Grading & Drainage Plan: Area "B":

46. Due to removal of the existing driveway, clarify if driveway will need to be regraded to keep proper drainage.

McAdams Response: The existing driveway will not be removed during this phasing.

47. Location of low point here, please provide the existing culvert size and the invert elevations.

McAdams Response: Culvert size and invert elevations not included in survey for specified pipe.

48. Please provide the existing pipe size, rim elevation, and invert elevation.

McAdams Response: Existing pipe sizes, rim elevation, and invert elevations have been added to the plans.

49. As per NCDOT Storm Drainage Guidelines, the pipe shown is an open cross pipe at a depth of 1' or less, hence 18" Class V RCP must be used. Ensure minimum coverage is met.

a. NCDOT reference: 2022 Guidelines for Drainage Studies and Hydraulic Design.pdf(ncdot.gov)

McAdams Response: Pipe depths have been edited to provide more than 1' of cover.

50. The shoulder appears to be cut off shorter along the entrance, please reference the Roadway Design Manual to size the appropriate cross section.

McAdams Response: Shoulder grading has been updated.

51. Please shift rip rap hatch to be centered with FES-300.

McAdams Response: Rip rap hatch has been centered with FES-300

52. There is a square assumed rip rap patch located partially on sheet C3.02 and partially on C3.03, please label and clarify the purpose.

McAdams Response: Rip rap patch has been labeled. Patch is used to dissipate channelized flow for this phase. Future phases will include the continuation of this ditch and the removal of the riprap pad.

Sheet C3.03 Grading & Drainage Plan: Area "C":

53. Clarify or Callout this assumed rip rap patch.

McAdams Response: Rip rap patch has been called out.

Sheet C5.00 Plan and Profile-Street A, Sta 10+00 thru Sta 20+95:

54. Adjust rip rap patch to be centered with structure.

McAdams Response: Rip Rap patch has been adjusted to be centered with structure.

55. Provide information on the size of this rip rap patch.

McAdams Response: Sizing of rip rap patch has been added to the plan.

56. Provide centerline alignment or remove stationing along area with no proposed road.

McAdams Response: Centerline alignment has been added to the plan and continues along area with no proposed road.

57. Based on there being 1' of cover over pipe an 18" Class V RCP must be used. Refer to previous comments.

McAdams Response: Pipe depths have been edited to provide more than 1' of cover.

58. Vertical curves must be 50' increments.

McAdams Response: Vertical curve has been updated.

59. Please provide information for this proposed vertical curve.

McAdams Response: Callouts have been added.

60. Typically, there is proposed and existing stationing and grades on plan and profile sheets.

McAdams Response: Proposed and existing grade at centerline is labeled in profile views with proposed PVI and vertical curvature elevations labeled appropriately.

61. Provide information on this curve.

McAdams Response: Callouts have been added.

Sheet C5.01 Plan and Profile-Street B, Sta 10+00 thru Sta 16+35:

62. Please provide the centerline alignment associated with these stations.

McAdams Response: Centerline alignment has been added to the plan and continues along area with no proposed road.

63. The top of the pipe in this location was roughly calculated to be at a depth of at or less than 1'. This requires that a Class V pipe must be used or ensure appropriate pipe depth in compliance with NCDOT requirements. See previous comments.

McAdams Response: Pipe depths have been edited to provide more than 1' of cover.

Sheet C6.00 Erosion Control Notes:

64. Provide Wake County Basin Removal Sequence Note.

a. Wake County ESC Reference: designing and Permitting | Wake County Government

McAdams Response: Basin removal sequence has been added on C6.00.

Sheet C6.01 Overall Erosion Control Plan Stage I:

65. Provide and label a construction entrance location.

McAdams Response: Locations have been added.

66. Provide and label a stockpile location.

McAdams Response: Stockpile location has been added.

67. Remove demolition items, add hatch to legend if indicating erosion control method. Additionally, these removals are outside of the limits of disturbance.

McAdams Response: Demolition items have been removed from plan sheet.

68. Provide label for the black line surrounding the existing inlet, if presumed to be inlet protection use the denoted legend style.

McAdams Response: Layer property has been updated and inlet protection has been added.

69. Wake County Erosion and Sediment Control standards require the sediment bag to be dimensioned on plan sheets, provide dimensions.

McAdams Response: Dimensions have been added.

70. Please clarify what this green label is being used for, remove if not necessary.

McAdams Response: Label has been removed from plan set.

Sheet C6.02 Overall Erosion Control Plan-stage II:

71. Provide inverts to existing structures along with pipe descriptions, in order to clarify where the rest of the site is draining.

McAdams Response: Invert information is now provided.

72. Update and verify the drainage areas for culverts with existing storm drainage shading indicted proposed areas.

McAdams Response: Drainage areas have been updated per provided markup.

73. Please consider adjusting the contour labels in several locations to ensure clarity while reading.

McAdams Response: Labels have been adjusted.

74. Label assumed rip rap box or include in legend.

McAdams Response: Label has been added.

Sheet C6.11 Erosion Control Details:

75. Ensure all details are from Wake County Sediment and Erosion Control Standard Details, provide details from website.

a. Sediment and Erosion Control Details | Wake County Government

McAdams Response: All applicable erosion control details have been updated to Wake County standard details.

76. To Match what is proposed on ESC plan and the legend, add the following details:

- a. Silt Fence Detail;
- b. Silt Outlet Detail;
- c. Construction Entrance Detail;
- d. Baffle Detail;
- e. Diversion Ditch Detail;
- f. Filter Berm Detail;
- g. Check Dam Detail;
- h. Slope Drain Detail; and
- i. Pipe Outlet to Flat area.

McAdams Response: Details have been added to erosion control detail sheets.

Sheet C7.00 Louisburg Rd. Widening Plan:

77. Will need to indicate a silt fence outlet or SEC for ditch.

McAdams Response: Silt fence and silt fence outlet has been added on erosion control sheets.

Sheet C8.00 Site Details:

78. If an accessible parking sign is to be used according to details specified, please show location on site plan.

McAdams Response: Location has been added to C2.02.

79. Show the guardrail offset location that is proposed.

McAdams Response: Dimensions have been added on sheet C2.01.

80. Show additional width for parallel parking. This will need to be included in the road section dimensions. Reference the NCDOT Roadway Design manual.

McAdams Response: Per conversations with the town parallel parking is not desired and will not be allowed on the site. No parking signage will be added.

Sheet C8.03 Storm Drainage and Utility Details:

81. Reference NCDOT pipe materials selection table.

McAdams Response: Note has been added to the detail.

Storm Drainage Calculations-Page 1:

82. The following items are required in the Storm Drainage Calculation Report.

- a. Skimmer;
- b. Diversion ditch;
- c. Velocity calculations;
- d. USGS Map; and
- e. FEMA Flood maps.

McAdams Response: Per meeting with reviewers on 9/8/2023, these items are not required to be added to the storm drainage calculation report.

Storm Drainage Calculations-Page 38:

83. Please include a pre and post development impervious/pervious for drainage areas. Additionally provide time of concentration calculations, including sheet shallow, and channel flow specified on drainage area map for pre and post development.

McAdams Response: Time of concentration calculations have been included in the calculations package.

84. Check the location if this edge of water label.

McAdams Response: Location is based on the existing conditions/survey. See sheet C1.00 included in this resubmittal set.

Storm Drainage Calculations-Page 39:

85. Consider adjusting the existing and proposed contour labels to provide ease of analysis while reading drainage area map.

McAdams Response: Existing labels have been greyed back to provide clarity.

86. Verify drainage area.

McAdams Response: Drainage area has been updated.

87. Verify the drainage area and add to drainage area 2 as this culvert outlet is located in DA 2.

McAdams Response: Callout has been adjusted to illustrate both areas are included in the post-DA 2.

Storm Drainage Calculations-Page 40:

88. Provide the drainage area for the existing storm system.

McAdams Response: Drainage area has now been provided.

89. Verify the drainage area in this location.

McAdams Response: Drainage area has been updated.

Storm Drainage Calculations-Page 41:

90. Refer to sheet C3.01 for comment regarding the pipe size.

McAdams Response: Pipe size has been updated.

91. Repeat comment: What storm is this system designed for, denote that on subsequent HGL profile sheets (pages 42, 43, 44). Please provide calculations for 25-year storm.

McAdams Response: The narrative was updated to reflect the design storm of 25 years and the NOAA chart has been updated. A note was added on the subsequent HGL profiles.

Consideration of this response is greatly appreciated. If you should have any questions or require additional information, please do not hesitate to contact me at 919. 361. 5000.

Sincerely,

MCADAMS

Eric Domonell
Assistant Project Manager

ED/ac