



# MORRIS ASSOCIATES

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December 21, 2016

Town of Poughkeepsie  
Town Hall  
One Overocker Rd.  
Poughkeepsie, NY 12603

Attn: Jon J. Baisley, Town Supervisor

**RE: Hudson Heritage DEIS Review Comments  
MA# 214401.00**

Dear Supervisor Baisley:

Morris Associates has reviewed portions of the DEIS and associated plans that were deemed complete by the Town Board on November 2, 2016. Based on this review the following substantive review comments are offered. Comments have been grouped according to the DEIS section to which they apply.

### General

1. The FEIS should include a discussion of how each development phase may be further broken down and modified when site plans for construction are submitted.
2. The FEIS text describing the proposed road profiles should correspond with the road profiles provided. The DEIS text indicates that a 2% minimum grade will be provided whereas the road profiles provided indicate a minimum slope of less than 1%.
3. Figure 2.2.4 shows Easement 4 on the westerly side of the site. Table 2.2.1 should be corrected to indicate that Easement 4 is on the westerly side of the site not the easterly side.
4. The easement grantees/purposes should be identified on Figure 2.2.4 or the drawing should have a reference back to Table 2.2.1 for the easement grantees/purposes identification.

### Geology - Soils, Topography and Steep Slopes

5. The FEIS should confirm that all earthwork quantities include both site grading and underground (pipe and cable) infrastructure construction and structure foundation excavation. Both earth and rock should be included in the cut-fill estimates. The cuts and fills should be compared by phase and to the maximum

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- extent practicable, surplus material from the site should be reused on site to flatten grades or raise building pads.
6. The earthwork summary on the Cut-Fill Plan appears to show no basements, only slabs on grade construction, for the commercial and residential construction. The FEIS should confirm that no basements will be excavated, or the earthwork summary should be revised to include volumes for excavation of basements.
  7. The earthwork summary on the Cut-Fill Plan does not appear to include excavation amounts for site lighting, water, drainage, sewer infrastructure or underground detention practices. The earthwork summary should be revised to account for the excavation required to install the required infrastructure.

**Water Resources**

8. The statement on page 111 of the DEIS, in section 3.6.D, indicating that no mitigation measures are required to mitigate impacts to Subsurface and Surface Water Resources is not supported by the plans. The text in section 3.6 should be revised to match the development proposal, and mitigation and a new conclusion should be provided.
9. The FEIS should include a map of the streams that shows the actual location of stream 862-403 and its major branches. Figures 3.6.1 and 3.6.2 must match and show identical stream locations. The same stream identification and location should be shown on the engineering plans, and piped portions of the stream should be shown as such.
10. The FEIS should acknowledge that portions of the project along the southerly and southeasterly boundary of the site are located within mapped floodplain according to current FEMA mapping.
11. The FEIS should include a full discussion of the proposed development within the FEMA floodplain. The discussion should include all potential impacts to the floodplain based on proposed grading, drainage revisions and stream relocation. Mitigation measures should be described as needed, including a possible LOMA to revise the floodplain limits surrounding stream 862-403 based on the current stream route.
12. If a LOMA is necessary, the involved agency list and the approvals list may need to be modified to include FEMA.
13. A Base Flood Elevation (BFE) should be determined for portions of stream 862-403 that impact the property, as required by FEMA regulations for projects that involve more than five acres of development. The BFE in the unpiped/open streambed portions of stream 862-403 south of the site, and the BFE in the unpiped/open streambed portions of stream 862-403 east of the site, should not

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be raised more than 1 foot per the flood insurance program requirements. The BFE within the site should be maintained below any catch basin or manhole rim for the piped stream relocation.

14. The stream 862-403 should be shown on the grading and utility plans, and the watercourse relocation or piping should be shown.
15. Plan sheet V100 should be revised to clearly indicate the course of stream 862-403. It appears that the watercourse may be piped next to or under the landfill.
16. The locations of other utilities, retaining walls and grading must be coordinated with any revised stream/pipe location.

**Stormwater Management**

17. The FEIS should include a discussion of how the 5 acre limit of disturbance per the SPDES permit will be enforced. If a Town waiver to exceed 5 acres of disturbance at one time is anticipated, the FEIS should clarify under what circumstances and for what phases a waiver may be requested.
18. The plans should clarify if the proposed work limits are also the locations for silt fence, or separately show the silt fence and other erosion control measures.
19. The FEIS should include a discussion of how water quality treatment standards will be satisfied at each stormwater outfall. If water quality treatment will be provided through a reduction of existing impervious surface, as permitted by the Stormwater Redevelopment standards, it should be clearly stated where this practice will be applied for each outfall.
20. Describe how downstream erosion will be minimized from all stormwater outfalls. It should be noted in the Master SWPPP that although the stormwater redevelopment standards consider a 25% reduction in impervious surfaces as satisfaction of the water quality requirements, channel protection standards must also be satisfied and may require a stormwater management practice to achieve those standards particularly where pipe discharges are proposed where they did not exist previously.
21. All underground detention practices should be provided with an overflow discharge pipe in the event of system failure.
22. The FEIS should acknowledge that drainage easements will be required wherever concentrated flow crosses property boundaries.
23. Based on Town mapping of drainage outfalls, it does not appear that all outfalls to stream 862-403 are shown on the mapping included in the DEIS. The FEIS should include revised mapping to indicate all outfalls, specifically in the vicinity of the landfill cap. All existing drainage piping must be shown.

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24. The FEIS and the Master SWPPP should be revised to include the HydroCAD routing diagrams, figures and maps showing the pre and post development drainage areas and outfalls, all updated to incorporate comments herein related to additional outfalls and mapping of Stream 862-403.
25. Confirm that all existing and proposed drainage areas have been analyzed using a time of concentration path originating from the hydrologically most distant point. The time of concentration path for Pre-development Subcatchments ES1, 2, 8 and 9 originate on rooftops which is unlikely to be the hydrologically most distant from the design point. It appears that a Tc path originating in the wooded area near the intersection of existing Subcatchments ES 3, 4 & 5 should be evaluated for Subcatchment ES4.
26. All design points should be located at the lowest point in the watershed under analysis and should not be located outside the subject watershed. Similarly, all time of concentration flow paths should terminate at the design point and not extend beyond the boundary of the subject watershed. Existing Subcatchments ES4, 5, 6 & 7 should be revised as appropriate.
27. The time of concentration path for Existing Subcatchment ES8 should be extended to terminate at Design Point 8. The analysis provided indicates that it currently terminates at the edge of the stream.
28. The time of concentration path for Proposed Subcatchment PS2, 5 and 10 should be illustrated on the Post-Development Watershed Delineation Map.
29. The Master Stormwater Pollution Prevention Plan should be revised to include a discussion of assumptions made when determining the time of concentration for each watershed. Specifically, please describe how the time of concentration for Proposed Subcatchments PS 6, 7, 8 and 9 were established.
30. Review all watershed boundaries to confirm that they have been drawn perpendicular to contours and/or follow natural and man-made drainage divides. The boundary between existing Subcatchment ES 5/6 does not appear to be drawn perpendicular to the existing contours. Similarly, the boundary between Subcatchment ES 6/7 does not appear to follow the crown of the existing entrance road as the existing contours seem to indicate.
31. The drainage analysis should be revised to account for any offsite runoff entering the project area.
32. The Post-Development drainage model should be reviewed to confirm the amount of impervious cover, curve number (CN) and time of concentration assumed for each post-development watershed. Specifically, the time of concentration for the post-development watershed draining to Design Point 1 should not be longer than the pre-development watershed.

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33. The Master Stormwater Pollution Prevention Plan should be revised to include a discussion regarding the impervious area assigned to each watershed. Visually, the amount of impervious cover does not seem to correlate to the impervious area indicated in the Post-Development Model results. Specifically, Post-Development Subcatchments PS1, 2, 6, 7, 8 and 10 should be addressed.
34. The Post-Development Watershed Delineation Map, Figure 5 in the Master Stormwater Pollution Prevent Plan, should be revised to include proposed elevation contour lines. Proposed contour lines are required to confirm elevations and slopes utilized in the post-development drainage model.
35. The watershed labels should be clearly indicated on the Pre- and Post-Development Watershed Delineation Maps.
36. Soil testing should be provided that supports the infiltration rates assumed in the analysis of the proposed stormwater management practices. A representative from this office must witness all soil testing.
37. The Grading and Erosion and Sediment Control plans must be revised to indicate the location of the 80' long x 20' wide broad crested weir modeled in the post-development analysis for Pond P2.
38. Table 5 in the Master Stormwater Pollution Prevention Plan indicates the storm events utilized for design of various facilities. This table should be revised to indicate that storm sewers must be sized based on the 25-year 24 hour storm event.
39. The floodplain reference in the Master SWPPP should reflect changes made by the Mid-Hudson Plaza development that altered the floodplain.
40. All drainage outfalls pre and post from the site to the east and south should be shown to the actual stream location. Outfalls to the west should show how they are directed or connected to the existing NYSDOT drainage facilities.
41. Drainage outfalls directed to the north should be configured to avoid erosion and damage to the cap of Landfill #1.

**Water**

42. For Section 3.8 A Water, The Town of Poughkeepsie provides water to the project site area, through the Town Water Improvement Area, as opposed to a Town wide Water District. The parcel is also within the HRPC Town Water District, which was set up to pay for the newly installed 12" water main. The water system provides water to the Town and City of Poughkeepsie, as well as portions of the Town of Hyde Park and through the Central Dutchess Water Transmission Line. Wappingers Falls is no longer served. The site is supplied through the Fairview Pump Station, which has a rated pumping capacity of 15

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- MGD. The other pump station has a much lower capacity and does not serve the site. The FEIS should be revised accordingly.
43. For Section 3.8 C Water, please confirm that the open space areas and individual parcels will not be irrigated and that the only irrigation areas are along the highlighted areas as noted on the irrigation plan. The text and plan should agree and the FEIS should note details on the type of irrigation facilities planned (centrally controlled or zoned controlled irrigation facilities).
  44. It appears that the majority of the newly installed 12" water main on the Hudson Heritage parcel is proposed to be relocated. The proposed relocation improvements will need to be in place and approved for use before any of the 12" water main is disconnected, with these areas turned over to the Town. The proposed relocation areas should also be confirmed in the FEIS as being outside of any hazardous areas.
  45. Any distribution facilities not to be turned over to the Town will need to be physically separated with a Town approved backflow preventer and meter pit, to isolate these sections from the Town water system. These locations will need to be noted on the detailed plans.
  46. The ownership of the proposed water mains and appurtenances should be clarified in the FEIS. The FEIS should indicate the specific entity/individual responsible for maintenances of piping, valves, curb stops, meters and backflow preventers.
  47. The Water Main Distribution Concept Plan should be revised to indicate Town ownership between existing Town owned mains and other existing service connections (i.e. to the properties in the Town of Hyde Park). Wherever water mains are to be owned by the Town, they should be located within easements to the Town or if installed within roadways, the road should be dedicated to the Town.
  48. The FEIS should include a discussion on fire protection, referenced from the Engineer's Report.
  49. For the Engineer's Report on Water, Appendix A, the same revisions noted above should be incorporated into the report. The report provides conceptual information on ranges of pipe sizing, PRV settings and fire flow demands, but there are no modeling results to verify that the conceptual information will meet the actual needs for the proposed development. The plans note the proposed water main locations, but there are no detailed pipe sizes, profiles, valve locations, connections or any other details needed to verify that the proposed water system improvements will meet the requirements of the Town of Poughkeepsie. Additional design information will be needed in the Engineer's

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Report and Plans to verify that the proposed water system improvements will meet Town of Poughkeepsie requirements. The Town Water Improvement Area owns 45% of the treatment capacity; this should be used in the analysis.

50. The FEIS should discuss the criteria for locating fire hydrants.

**Wastewater**

51. The FEIS must indicate that formation of a Sanitary Sewer District will be required to serve the Hudson Heritage Property. Formation of this district will require preparation of a map, plan and report prepared by a license professional engineer. District formation must also comply with the requirements of the Memorandum of Understanding between the Town of Poughkeepsie, the State of New York and Hudson Heritage CPCR Ventures, LLC.
52. The Sanitary Sewer Concept Plan (Figure 1) indicates a mix of public and private ownership upstream of the existing sewage pump station. It is recommended that once a sewer is Town owned all downstream sewers should be Town owned (except for the portion to be owned by NYS). Wherever sewers are to be owned by the Town, they should be located within easements to the Town or if installed within roadways, the road should be dedicated to the Town.
53. The ownership of the proposed sewers and appurtenances should be clarified in the FEIS including the relocated CIA force main. The FEIS should indicate the specific entity/individual responsible for maintenances of piping, cleanouts, manholes and pump stations.
54. The FEIS should clarify if the NYS owned sewer is existing or proposed. The Sanitary Sewer Concept Plan (Figure 1) calls it proposed but Section 3.9 seems to suggest it is existing. If it is an existing pipe to be replaced and relocated the FEIS should discuss why the State will maintain ownership and not the Town. If it is an existing pipe to be replaced and relocated has the State agreed to the concept of the replacement and relocation and will State approval of the design plans be required? If State approval is required it should be added to the list of required approvals.
55. The FEIS should include a description of the existing Culinary Institute of America force main connection. The text should indicate who will own and maintain the proposed Culinary force main. If it is currently privately owned is the owner in agreement with the proposed modifications?
56. Describe how existing sewage flows from the off-site areas to the east and the Culinary will be maintained during construction.
57. The existing sanitary force main from Culinary and any associated easement should be indicated on the engineering plans and Figure 2.2.4.

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58. The FEIS should consider the impacts from construction of the proposed sewer trunk line across the Great Lawn. An alternate plan should be considered to minimize impacts to this protected area.
59. The FEIS should discuss the need for an additional pump station at the revised sewer force main connection from the CIA.

**Solid Waste**

60. The figures in the FEIS and all engineering plans should show the limits of the two solid waste areas within the site.
61. The FEIS should assess the impact of regrading, including increasing or decreasing cover over the landfill liner cap and how that affects the landfill cap performance.
62. The FEIS should assess the ability of the landfill liner cap to withstand construction equipment loading, and the ability of the landfill cap to withstand future vehicular loads.
63. The FEIS should assess the impact on the landfill performance from the additional loading that will result from future development and the impact that the additional loading will have on the amount of landfill leachate produced. An analysis of the current landfill leachate collection and disposal system, and if any modifications are required should be discussed.
64. Address the impact of the additional stormwater and snow melt runoff on the amount of leachate produced by each of the existing landfills.
65. The FEIS should discuss the uncontrolled leachate spill from the southerly landfill (Landfill #6) to stream 862-403, including proposed mitigation.
66. The FEIS should assess the impact to the liner cap integrity from the proposed utility construction (light pole bases and electric lines, drainage lines and catch basins).
67. The FEIS should assess on-going maintenance, including filling depressions and maintaining grades for drainage, in the parking areas over the landfill.
68. Discuss the need for any variances, exemptions, or other Town concessions regarding trees and landscaped islands and lights within the parking area over the landfill.

**Construction**

69. The FEIS should discuss and show on a figure, and the SWPPP should be revised to include, additional disturbance areas beyond the limited contractor sites shown on Figure 3.20.1. Conceptual drawings by phase showing the site under construction should be prepared and include an area for construction



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manager office trailer and employee and visitor parking, a reasonably sized area for the various contractor office and trades trailers, equipment parking, maintenance and fueling, worker parking, and material laydown areas, along with appropriate stormwater pollution prevention measures.

70. Engineering plans included with the FEIS should clearly identify buildings and pavement that will remain after demolition activities are complete.
71. The Director's Residence should be given an alpha numeric designation and its proposed reuse should be described in Section 2.8.
72. The FEIS should include a discussion regarding the ability to stockpile excess cut material from the initial phases of construction for use in later phases when fill material will be required.

**Engineering Plan Set**

The following comments refer to the plan set accompanying the DEIS. The comments below should also be addressed as applicable in FEIS text revisions to ensure consistency between the plans and text.

73. The proposed Site Plans should clearly indicate the demolition work proposed for all phases. The FEIS should include drawings showing the proposed demolition, including building demolition, pavement removal and other related work. Features to remain, including water, sewer, gas, drainage, roads, etc. should be readily identifiable.
74. The legend on the Title Sheet G100 should clarify the meaning of the abbreviation 'FFE'.
75. The dimensions and other characteristics of all existing culverts/bridges on the CSX railroad should be labeled on sheet V100.
76. The Existing Conditions plan should be checked to verify that drainage outfalls within the capped landfill limits are correct. The full length of both pipes at the second headwall from the east should be shown.
77. The Director's Residence, identified in the DEIS in section 2.8, to be restored should be clearly labeled on all plan sheets.
78. The tabulations in Figures 2.1.2 and 2.1.3 should be coordinated with the building labels provided on the Site Plan drawings. The plans and text should reflect the same building square footage and number of stories.
79. The Grading and Erosion and Sediment Control Plans should be revised to indicate proposed contours properly tied into existing grade.
80. The Utility Plans should be revised to indicate all required valves and appurtenances at tees and cross connections. A three valve cluster should be

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- provided at every tee in the waterman trunk line and all changes in direction of a waterman trunk line should be made with 1/8 or shallower bends.
81. Sheet C101 should be revised to coordinate with the FEIS text regarding the intent of Winslow Gate Road. The DEIS says the road would be offered to the Town for dedication as a public street, but the plan sheet shows it as a private minor road. It appears the road should be designed for heavy truck traffic in either case.
  82. Sheet C144, the Cut-Fill Plan, appears to indicate a cut near the capped landfill. The outline of the capped landfill should be shown on this drawing for clarity.
  83. Sheet C144, the Cut-Fill Plan, should show the outlines of the proposed underground stormwater detention areas where significant excavation may be required.
  84. Sheet C160, the Overall Utility Plan, should outline the area of the Great Lawn and show the location of the proposed sewage pump station.
  85. The individual Utility Plan sheets should identify if any buildings that will require individual sewage ejector stations.
  86. The scale indicated for each profile on Sheet C180 should be confirmed.
  87. The vertical curve in detail 2/C180 at Sta 23+61.72 should be revised to be minimum 100' long as required by Town Code.
  88. The road grade in detail 2/C180 between Sta 22+93.40 and Sta 23+36.72 should be revised to be minimum 1% as required by Town Code.
  89. The road profiles for Hudson View Drive and Paint Shop Road should be revised to blend smoothly into existing grade. If retaining walls are necessary at the end of a cul-de-sac or a connection to another road is proposed, they should be clearly identified on the road profile.
  90. The profile for the loop road shown on Sheet C181 should be coordinated to ensure the elevation at Sta 0+00 and 25+00 matches the corresponding elevation of Hudson View Drive where the two roads intersect.
  91. The profile for Road #4 shown on Sheet C181 should be coordinated to ensure the elevation at Sta 3+44.80 corresponds with the elevation of Paint Shop Road where the two roads intersect. Similarly, the profile for Road #4 should be revised to blend smoothly into the connection with the existing road at Sta 0+00.

Town of Poughkeepsie  
Poughkeepsie, NY 12603

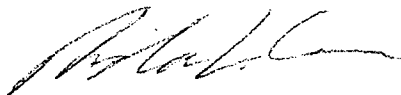
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This concludes the review of the current DEIS submission. Additional comments may be generated based upon review of future submittals. If there are any questions please contact me at (845) 454-3411 extension 20.

Very truly yours,

**MORRIS ASSOCIATES,**  
Engineering & Surveying  
Consultants, PLLC



Andrew Learn, PE  
Sr. Engineer

Cc: Neil Wilson, Esq., Town Director of Municipal Development  
Don Beer, Town Engineer  
Stuart Mesinger, AICP  
Nina Peek, AICP  
David Cooper, Esq.

**Carol Barone**

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**From:** Andy Learn <ALearn@MorrisEngineers.com>  
**Sent:** Wednesday, December 21, 2016 11:39 AM  
**To:** Carol Barone  
**Subject:** FW: Hudson Heritage DEIS Review Comments  
**Attachments:** 2016-12-21-DEIS Comment Ltr. to Town.pdf

Hi Carol,  
Please see the attached letter for your records.  
Thanks,

Merry Christmas!

*Andy*

**Andrew L. Learn, PE** Senior Engineer  
**Morris Associates Engineering & Surveying Consultants, PLLC**  
[alearn@morrisengineers.com](mailto:alearn@morrisengineers.com) (845) 454-3411 x20

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**From:** Suzanne Goodwin  
**Sent:** Wednesday, December 21, 2016 11:36 AM  
**To:** Jay Baisley  
**Cc:** [nwilson@townofpoughkeepsie-ny.gov](mailto:nwilson@townofpoughkeepsie-ny.gov); Donald Beer; [npeek@akrf.com](mailto:npeek@akrf.com); [Dcooper@zarin-steinmetz.com](mailto:Dcooper@zarin-steinmetz.com); [smesigner@chazencompanies.com](mailto:smesigner@chazencompanies.com); Andy Learn  
**Subject:** Hudson Heritage DEIS Review Comments

Supervisor Baisley,  
Per Andy Learn, please find attached a letter regarding Hudson Heritage.

Regards,

*Suzanne*

Suzanne Goodwin  
Assistant to the Dir. of Marketing

**MORRIS ASSOCIATES**

**Engineering & Surveying Consultants, PLLC**

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