



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

January 21, 2025

Mr. Pascal Rettig, Chairman
Amesbury Planning Board
52 Friend Street
Amesbury, MA. 01913

Mr. Nipun Jain, Director
Amesbury Community & Economic Development
39 South Hunt Road
Amesbury, MA. 01913

Re: Response to Peer Review Comments for
Stormwater Report and System Peer Review for Site Plan Application for
Assessor Map 85 - Lot 59 at 80 Haverhill Road - Amesbury, MA
Applicant: 80 Haverhill Road LLC

Members of the Board,

The following provides our response to design review comments provided by Michael Leach and Gerald Fortin of Stantec Consulting Services. Please note we have included the peer review comments with our response to assist the Board with its review.

<i>Stormwater Management Report:</i>	
<i>Comment 1:</i>	<i>Standard 1: The Applicant proposes new paved driveway from Haverhill Road with a portion of the new paved driveway located within the City's ROW (an off-site area) that is not addressed in the report or analysis. Based upon the limited design grading information presented, it appears the driveway will create sheet flow discharge towards and within the ROW and pavement of Haverhill Road and potentially increase runoff. The Applicant should review and provide treatment for this new pavement discharge to meet compliance with standard 1 and include and address this off-site area under Standard 2 to demonstrate no increase in runoff.</i>
MEI Response:	Due to site constraints, it is not feasible or practical to catch and treat the 7' of (off-site) driveway. MEI believes the 7 ft. of pavement proposed within the Haverhill Road ROW is de minimis and will not cause an increase in runoff.



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<i>Comment 2:</i>	<i>Standard 2: The report does not address the impacts to abutting Lot 60 Map 85 (78 Haverhill Road) under the pre and post development conditions to demonstrate compliance is achieved. The analysis should be updated accordingly.</i>
MEI Response:	MEI has revised the pre and post watershed maps to include the small area along the eastern edge of the site running towards 78 Haverhill Road. There is a decrease in runoff as shown in the watershed summary table.
<i>Comment 3:</i>	<i>Standard 2: The existing conditions delineation for subcatchment E1 and E3 is incomplete and does not address/account for the off-site areas that may contribute sheet flow to the site from abutting lot 60. We note the proposed grading design indicates portions of the finish grade along the easterly side of the proposed driveway is above the existing grading and will sheet flow to the abutting lot that is not addressed in the report. Please review and revise the existing subcatchment delineation and analysis accordingly. In addition, the post development subcatchment delineations and analysis should be revised accordingly and demonstrate compliance is achieved – no increase in runoff.</i>
MEI Response:	MEI has revised subcatchments E1 and E3 to account for the small portion of runoff flowing towards 78 Haverhill Road. There is a decrease in runoff as depicted in the watershed summary table.
<i>Comment 4:</i>	<i>Standard 2: The existing conditions delineation for subcatchment E2 appears incomplete and does not address/account for any off-site areas that may contribute sheet flow to the site from portions of abutting lot 58 (82 Haverhill Road). Please review and revise the existing subcatchment delineation and analysis accordingly. In addition, the post development subcatchment delineations and analysis should be revised accordingly and demonstrate compliance is achieved – no increase in runoff.</i>
MEI Response:	MEI disagrees with this comment. Subcatchment E2 as depicted on the pre and post watershed maps accounts for the stormwater runoff flowing to 82 Haverhill Road. There is a decrease in runoff as shown in the watershed summary table.
<i>Comment 5:</i>	<i>Standard 2: The report lacks hydraulic pipe calculations for the proposed pipes and pipe network systems indicating the system pipe velocities, hydraulic grade line/elevations to demonstrate the proposed systems are of adequate size to convey flow under gravity conditions for the storm events and demonstrate the minimum velocity of 3 FPS and maximum 10 FPS are provided per section 7.10.C of the Amesbury Subdivision Rules and Regulations. The analysis should be updated accordingly.</i>
MEI Response:	MEI has revised the stormwater report to include pipe sizing calculations.



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Comment 6:	<i>Standard 4: The checklist indicates a Long Term Pollution Prevention Plan (LTPPP) document is included in the report, which is undated. Upon review, we note the document includes both construction information (Standard 8) and some information on Post construction BMP's (Standard 4), but the document lacks the necessary items noted under the standard.</i> <i>A. Please clarify/address the following items in the Post Construction BMP's that is part of Standard 4, which appear to be absent and which typically includes the following:</i> <i>1. Good housekeeping practices;</i> <i>2. Provisions for storing materials and waste products inside or under cover;</i> <i>3. Vehicle washing controls;</i> <i>4. Requirements for routine inspections and maintenance of each stormwater BMP and checklist that identifies each BMP (provide O&M manuals for all systems);</i> <i>5. Spill prevention and response plans;</i> <i>6. Provisions for maintenance of lawns, gardens, and other landscaped areas;</i> <i>7. Requirements for storage and use of fertilizers, herbicides, and pesticides;</i> <i>8. Pet waste management provisions;</i> <i>9. Provisions for solid waste management;</i> <i>10. Snow disposal and plowing plans (including location plan);</i> <i>11. Winter Road Salt and/or Sand Use and Storage restrictions;</i> <i>12. Driveway/parking lot sweeping schedules;</i> <i>13. Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges.</i> <i>14. Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;</i> <i>15. A plan identifying each BMP location requiring maintenance under the BMPS should be included in the document.</i> <i>16. Name of the stormwater management system owners;</i> <i>B. Amesbury is a MS4 community, and we recommend copies of the stormwater inspection checklists be provided to the City on an annual basis. This should be noted in the document.</i> <i>C. Please provide an endorsement for the illicit discharge statement to meet compliance with standard 10.</i>
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	<i>D. We recommend the updated document be a separate complete document as typically requested by the Board.</i>
MEI Response:	MEI has provided separate operation and maintenance manuals for both Construction phase and post construction phase. Please refer to the documents for the additional information requested above.
<i>Comment 7:</i>	<i>Standard 4: It is unclear if the adjusted water quality calculations for the TSS removal in the report has addressed the pavement located in the ROW as identified in comment 1 above under standard 1. Please review and clarify in the updated submission.</i>
MEI Response:	As explained in comment 1, MEI believes the 7 ft. of pavement within the Haverhill Road ROW is de minimis. Furthermore, it would require impractical grade alterations in attempt to catch and treat the insignificant amount of impervious area.
<i>Comment 8:</i>	<i>The report does not include supporting information relative to Standard 6. Are there any critical habitats in proximity to the site? Please clarify and include supporting information in the updated submission.</i>
MEI Response:	There are no critical habitats in proximity to the site.
<i>Comment 9:</i>	<i>Standard 8: The report includes information relative to the Erosion and Sediment Control BMP's in the LTPPP document, which should be provided in a separate document. We note the current information does not reference the plans and details. We note this section also indicates the project is not subject to an EPA Construction General Permit (CGP) and a SWPPP has not been prepared or provided. We recommend the Applicant prepare and provide a Construction Period Pollution Prevention and Erosion and Sediment Control Plan document which shall clarify/address the following relative to standard 8:</i> <i>A. Narrative.</i> <i>B. Construction Period Operation and Maintenance Plan;</i> <i>C. Names of Persons or Entity Responsible for Plan Compliance;</i> <i>D. Construction Period Pollution Prevention Measures (i.e., stockpiles, waste material dumpster, hazardous waste, sanitary waste facilities, etc.);</i> <i>E. Erosion and Sedimentation Control Plan Drawings;</i> <i>F. Detail drawings and specifications for erosion control BMPs,</i> <i>G. Vegetation Planning;</i> <i>H. Site Development Plan;</i> <i>I. Construction Sequencing Plan;</i> <i>J. Sequencing of Erosion and Sedimentation Controls;</i> <i>K. Operation and Maintenance of Erosion and Sedimentation Controls;</i> <i>L. Inspection Schedule;</i> <i>M. Maintenance Schedule;</i> <i>N. Inspection and Maintenance Log Form</i>



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

MEI Response:	MEI has provided separate operation and maintenance manuals for both Construction phase and post construction phase. Please refer to the documents for the additional information requested above.
<i>Comment 10:</i>	<i>An estimated operations and maintenance budget per Standard 9 was absent. Please include with updated submission in the LTPPP.</i>
MEI Response:	An Estimated operations and maintenance budget has been provided in the Long-term operations and maintenance plan.
<i>Comment 11:</i>	<i>The report includes separate tables for the pre and post conditions. We recommend the report be updated to provide a summary table showing the pre and post development flows to each location with a summary of changes under the post development conditions to simply clarify compliance as typically requested by the Board. Please update the report accordingly.</i>
MEI Response:	MEI has revised the stormwater report to include a summary table showing the pre and post development flow rates.
Site Plan Set:	
<i>Comment 1:</i>	<i>We recommend the Applicant clarify/address the following relative to the grading and drainage plan – sheet C-6:</i> <i>A. The drainage design indicates HDPE pipe is proposed, which does not comply with the reinforced concrete pipe class III (RCP-CIII) in the specific design and construction standards of Section 8.04.A.1 of the Amesbury Subdivision Rules and Regulations referenced under Section XI.C.8.p of the Bylaws. The Applicant should revise the design in compliance with the regulations.</i> <i>B. Please label the size, type, length, and slope of the drain pipe from CDS#2 to the chamber pipe manifold, and please label the size, type, length, and slope of each of the chamber system manifold pipes for proper construction.</i> <i>C. The Applicant's stormwater design at CB#1 and CB#2 indicates the proposed pipes will have less than 1 foot of cover, which does not meet the cover requirements of HDPE pipe, and will be placed within the gravel portion of the pavement cross section, which is not recommended. We note that none of the proposed drain pipes provide the required 3 feet of cover over the pipes per the specific design and construction standards of Section 8.04.A.1 of the Amesbury Subdivision Rules and Regulations referenced under Section XI.C.8.p of the Bylaws. The Applicant should revise the design in compliance with the regulations. Should a waiver be considered, the City typically requests RCP Class V (RCP C-V) be provided when cover is less than 3 feet.</i>



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	<i>D. Please revise the design to provide the minimum pipe size of 12 inches between CB#4 and CDS#2 per specific design and construction standards of Section 8.04.A.1 of the Amesbury Subdivision Rules and Regulations referenced under Section XI.C.8.p of the Bylaws.</i> <i>E. The proposed 124 contour along the easterly side of the driveway does not appear to be properly graded based upon the spot elevation of 124.4 and the 124 contour crossing the driveway to provide the necessary shoulder width to support for the proposed curb along the driveway before grading to meet existing ground. In addition, it is unclear that the existing drainage flow at the northeasterly edge of the existing driveway will be maintained with the proposed grading of the 124 contour. We recommend the Applicant provide an enlarged detail along the easterly side of the proposed driveway clarifying the existing and proposed grading design intent including spot elevations to demonstrate that the proposed development will not discharge runoff to the abutter as implied in the submitted stormwater report. The enlarged detail should clarify and ensure proper construction in the vicinity of the abutter and proposed fence. Please update the plan set accordingly. In addition, please label the proposed curb on the site plan for clarify.</i> <i>F. It is unclear if the proposed curbed driveway that is extended to the edge of uncurbed pavement at Haverhill Road will impact the existing roadside drainage pattern/swale. Please clarify and provide supporting information/documentation that the Department of Public Works will allow curbing to extend into the uncurbed ROW at the proposed driveway.</i> <i>G. We recommend inspection ports be provided for each subsurface stormwater system. Please indicate the locations on the plan and provide a detail in the plan set for proper construction.</i>
MEI Response:	A. The applicant has requested a waiver from section 8.04A.1 of the Amesbury subdivision rules and regulations requiring the use of RCP pipe for the drainage system. B. MEI has revised the plans to include labels for both the inlet pipe from CDS2 and the chamber manifolds. C. MEI disagrees with this comment. The proposed rim grades of CB1 and CB2 are 122.15' with invert grades of 119.15' providing 2' minimum of cover of the drain pipes. Per AASHTO, the Minimum cover in traffic applications for HDPE pipe diameters from 4"- 48 is 1 ft. The applicant has requested a waiver from section 8.04A.1 of the Amesbury subdivision rules and regulations requiring a minimum of 3 feet of cover over drainage pipes.



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	D. An 8" pipe was proposed to provide a minimum of 2' over the pipe. The applicant agrees to this change provided 1.7' of cover over the pipe is deemed acceptable to the review engineer. E. MEI believes the grading is correct. A larger shoulder is not feasible due to site constraints. An additional 124.5 spot grade has been added on the opposite side of the curb by the 124.4 spot grade thus setting the curb 11.2" below grade. MEI believes this is enough to support the curb. F. MEI has revised the plans to remove all curbing within the ROW. G. The plans have been revised the include inspection ports and correlating detail for proper construction (Sheet C-10)
<i>Comment 2:</i>	<i>We recommend the Applicant clarify/address the following relative to the erosion and sedimentation control plan – sheet C-8:</i> <i>A. Please indicate and label the proposed topsoil stockpile location on the plan and the proposed erosion control measures noted in the LTPPP construction information provided in the stormwater report. We note that this description calls for silt fence that is inconsistent with the project details. Please review and update as applicable.</i> <i>B. Please indicate, label, and provide a detail for catch basin inlet protection for proper construction.</i> <i>C. Due to the limited site constraints, we recommend the applicant indicate and label the initial locations of typical construction BMP's such as waste material dumpsters, hazardous waste storage, sanitary waste facilities, concrete/construction washout areas, vehicle maintenance/refueling locations, etc. Please review and revise the plan accordingly.</i> <i>D. We recommend a construction sequence be noted on the plan.</i>
MEI Response:	A. The proposed topsoil stockpile location has been added to the plan. In addition, MEI has provided a separate construction phase O&M manual and revised the erosion control description accordingly. B. MEI has revised the sedimentation control plan to include inlet protection for each of the proposed catch basins. Additionally, a silt sack detail has been added to the plan.



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	C. MEI has revised the sedimentation control plan to include waste material dumpsters, hazardous waste storage, and sanitary waste facilities. Please refer to the separate construction phase operation and maintenance manual for additional details. D. A Construction sequence has been added to the general notes (Sheet C-2).
<i>Comment 3:</i>	<i>We recommend the applicant clarify/address the following relative to the project details:</i> <i>A. The elevation information provided in the Stormtech SC310 detail on sheet C-10 do not match the site plan or stormwater report elevations. Please review and revise accordingly.</i> <i>B. Please label the size, type, length, and slope of each of the chamber system manifold pipes for proper construction in the details on sheet C-10.</i> <i>C. Please provide a typical drain pipe trench detail in the plan set for proper construction.</i> <i>D. Please indicate and label the proposed bedding for the Contech CDS units in the detail on sheet C-11.</i>
MEI Response:	A. MEI has revised the table in the Stormtech SC310 detail to depict the correct elevation information. B. The Stormtech details on sheet C-10 have been revised to include the requested information above. C. A typical drainpipe trench is provided on sheet C-2. D. The Contech CDS detail on sheet C-11 has been revised to specify 6" of crushed stone for the bedding.

We trust this response letter provides the necessary information for the Board's review. If you have any questions or comments, please feel free to contact our office at your convenience.

Sincerely,

Millennium Engineering, Inc.

Sam Colombo
Project Manager