



Quaker Valley School District
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June 19, 2026

Project No. 21-109

Mr. Louis Turka, P.E., Environmental Group Manager Pennsylvania Department of Environmental Protection
Waterways and Wetlands
Southwest Region Office 400 Waterfront Drive
Pittsburgh, PA 15222

RE: Response to Department Technical Deficiency Letter Quaker Valley School District
NPDES Permit Application No. PAD020098
Leet Township, Leetsdale & Edgeworth Boroughs, Allegheny County

Dear Mr. Turka:

Phillips & Associates, Inc., Streamline Engineering, Inc., and Civil & Environmental Consultants, Inc. have reviewed the Technical Deficiency Letter dated December 24, 2025. Below are the responses:

Technical Deficiencies General Comments

1. §102.8(g)(1), 102.4(b)(5): Geotechnical:
 - a. To complete the grading as outlined in Revised Geotechnical Exploration and Engineering Report II; Mass Grading Evaluation (Report II), dated November 14, 2023, revised March 8, 2023, permits for the proposed grading will be required by both Leet Township and Edgeworth Borough. What is the current status of these permit applications?

Response:

In discussions with Leet Township in fall 2025, they requested that we submit site geotechnical design information to them, as completed, prior to a final grading permit application package being submitted. Geotechnical Construction Plans (for proposed fill slopes and MSE Walls on the site), technical specifications and slope stability analysis documents were submitted to Leet Township, for review by the Leet Township's Engineer (LSSE Civil Engineers and Surveyors) and Geotechnical Engineer (Ackenheil Engineers). After Leet Township has completed its preliminary review of all the plans, details, specifications and analysis and we have addressed their review comments, a complete grading permit application package for the site will be submitted to Leet Township. Demolition permit and grading permit applications for the portion of the project in Edgeworth Borough (minor slope grading), and for the demolition of a concrete house foundation and re-grading of the area, respectively, will be submitted after the NPDES permit is approved. A grading permit application for the portion of the project in Leetsdale Borough (minor grading for SWMF-2) will be submitted after the NPDES permit is approved.



- b. Report II states that county approval of the drilling plan is needed for the anticipated cut into old landslide deposits on site. What is the current status of this?

Response:

Allegheny County Public Works (ACPW) has reviewed and approved the original drilling plan submitted at that time and approved the plan by the District. Since that time, portions of the applicable grading plans, along with technical specifications, have been submitted to ACPW for tie-ins to the AC-owned roadway (Camp Meeting Road), namely, for the Upper Entrance (Main Entrance) and the Lower Entrance. Both of those tie-ins require some cutting of existing landslide deposits. ACPW has approved both of those submittals. The complete HOP permit package was submitted to ACPW for review and approval. ACPW reviewed the HOP plans (which included Geotechnical Construction Plans and stability analysis for both driveways,) and all review comments have been addressed to their satisfaction. The ROW dedication Plan and Intergovernmental Cooperation Agreement required by ACPW is being reviewed by County Attorney's before going to Allegheny County Council for approval. After approval by County Council, the HOP permit will be issued.

- c. Coordination and potentially permitting is needed to complete the proposed design for portions of the work effecting Camp Meeting Road. Provide a discussion of the status of this, an anticipated timeline for the completion of the modelling and design of these areas and the status of any needed further coordination and permitting with Allegheny County.

Response:

As indicated above, ACPW has already approved our recommended test drilling scope, and the geotechnical work associated with the tie-ins of both the Upper and Lower Entrance Roads. No further coordination is anticipated at this time. However, some coordination is anticipated during construction. The District has already committed to engaging Garvin Boward Beitko Engineering, Inc. (GBBE) to provide geotechnically-salient construction observation/monitoring services, in addition to any monitoring that may be provided by ACPW.

- d. The Report II describes the use of reinforced slopes with basket facing and layered geosynthetic reinforcement. Provide standard construction details, product cut sheets, and design plans for this construction method.

Response:

Geotechnical Construction Plans, technical specifications and slope stability analysis documents for the proposed reinforced soil slope (RSS) are a part of the submittal package. See submittal Section 8-E Reinforced Soil Slope Geotechnical Construction Plans. Report II was only intended to show that the reinforced slope could be designed with the appropriate factor of safety for global stability. The internal stability is addressed by the design documents and technical specifications included with the construction plans. The requested construction details, product



cut sheets, and design plans are required, by Leet Township, to be submitted as part of the Grading Permit Application. As such, all of this material will be submitted to Ackenheil Engineers, who will be reviewing the Grading Permit application on behalf of Leet Township.

- e. Describe the methodology or rationale used to select the sampling locations as well as which sample locations and depths were selected for the laboratory analysis.

Response:

The spacing of the initial test borings was selected to provide overall coverage of the originally planned development area and to fill in informational gaps, as the drilling was completed in phases. The local geotechnical "standard of care" was used to select spacing, depths, and sample intervals. In some cases, supplemental test borings were added as the usage and loadings in those areas became better defined as the design progressed. For instance, the initial round of test borings, identified as GBB-Series test borings, were widely spaced, on an approximate 500-750-ft grid, in order to provide a general indication of the subsurface and geologic conditions prior to purchase. This was completed during the due diligence phase of the project. This initial spacing doesn't meet the "standard of care" for structures or for mass grading. The spacing for structures is generally 100 feet or less, while the spacing for mass grading is generally between 200 and 400 feet.

The laboratory testing locations were selected similarly. The initial sample test locations were generally chosen to better define the engineering characteristics of different soil and bedrock layers that were uncounted across the site. As the design progressed, it becomes evident which soils will be cut and then re-used as engineered fill. It also becomes clearer which soils, and bedrock will be subjected to new loads from the planned development. Those samples were generally chosen for shear strength testing.

- f. Demonstrate that the grading setbacks for both the municipal requirements and the Department's requirements found in the Department's Erosion and Sediment (E&S) Pollution Control Program Manual, dated March 2012 on Table 16.1 are met in the final grading plan submission and E&S plans.

Response:

The recommended minimum setback for fill placement in the vicinity of regulated waters, highways, railroads and other public transportation facilities per Table 16.1 were considered for this project. The site is located along Camp Meeting Road (County Road) and there are several water courses that traverse the property. To develop the site for a new high school with two access driveways, some of the proposed fill and cut slopes are located within the minimum setbacks (waters and highways). To construct the lower driveway access requires crossing of a water course, construction of a fill embankment and a proposed cut slope below Camp Meeting Road. To construct the upper driveway access requires the realignment of Camp Meeting Road



and construction of a fill embankment. The geotechnical engineer for the project Garvin Boward Beitko Engineering, Inc. (GBBE) evaluated each of the fill placement slopes and cut slope areas which are located within the minimum setbacks (waters and highways). GBBE has designed the fill and cut slopes to meet the appropriate factor of safety for long-term global stability. GBBE prepared Geotechnical Construction Plans, technical specifications and slope stability analysis documents for each of the proposed fill placements slopes and reinforced cut slope areas. See submittal Sections 8-A Lower Entrance Geotechnical Construction Plans, 8-B Upper Entrance Geotechnical Construction Plans, and 8-C High Side Cut Geotechnical Construction Plans.

- g. Provide details or specifications for what is to be done during construction if perched water tables are encountered.

Response:

As indicated on Page 15 of Report II, groundwater control does not appear to be a major issue for this project based on the borings drilled across the site; however, some perched groundwater will likely be encountered. The District will require that its contractor be prepared to protect exposed soils from surface runoff, water tables, perched water, or other sources of water. The dewatering system design and installation typically will be the responsibility of the general contractor, as it is the normal standard of care for the contractor to be solely responsible for dewatering, if needed. The technical specifications shown on the Geotechnical Construction Plans (which are a part of this submittal) for grading work will reinforce that approach. The District's engineer will monitor dewatering activities to confirm that they comply with appropriate standards. On the E & S Plans for the RSS construction we have shown the installation of an outlet pipe for all the bench drains to discharge below the Sediment Basin SB-1/SWMP-2 into UNT-6.

- h. Provide construction methods and details, including steps in the construction sequence of how the keyway, benching and intermediate benching will be constructed for the proposed grading.

Response:

Construction methodology is the responsibility of the Contractor. The Geotechnical Construction Plans and technical specifications show the toe benching, intermediate benching, and drainage required to construct the fill embankments at the site (located in Section 8 – Geotechnical Evaluation). The District's engineer will monitor construction to ensure the safe and compliant completion of site grading.

- i. Provide construction methods and details for slope drainage needed for the proposed benches to prevent stability issues and drainage problems.

Response:



As indicated above, construction methodology is the responsibility of the Contractor. The Geotechnical Construction Plans and technical specifications show the toe benching, intermediate benching, and drainage required to construct the fill embankments at the site (located in Section 8 – Geotechnical Evaluation). These plans show the specified pipe types/sizes, specified gradient, and specified spacing of outlet drains at the toe bench (which are a part of this submittal). As noted, the District’s engineer will monitor construction to ensure the proper installation of slope drainage features.

- j. Provide design information, details, and specifications for the mass-gravity-retaining wall/slopes or other retaining walls or structural support that are proposed for use.

Response:

Geotechnical Construction Plans, technical specifications and slope stability analysis documents are a part of this submittal and may be found in Section 8 – Geotechnical Evaluation for the mass-gravity-retaining wall/slopes proposed on the site.

- k. The Report II states that for the area associated with the cut slope near section G—G that due to proximity to Camp Meeting Road and proposed cut into old landslide deposits that additional testing, modelling and recommended practices are still pending evaluation. Provide a status update on this and an amended report that addresses these problematic areas, and the proposed design.

Response:

As indicated under bullet items b and c, we drilled additional test borings and completed additional modeling after Report II was submitted. Our evaluation of the test boring results and additional modeling indicates that the most efficient way to safely support the cut is via a top-down soil nail restraint system with a shotcrete facing [ME5.1]. Therefore, in order to take best advantage of geotechnical specialty contractors, we have developed performance specifications for a top-down soil nail system. The technical specifications require an experienced specialty contractor, and experienced crew, and submittal of the design methodology to the District’s engineer GBBE for review. Further, the design must be completed for a 75-year design life as is typical for FHWA projects of this type. See Section 8-C High Side Cut Geotechnical Construction Plans.

- l. It should be anticipated that a significant amount of ‘waste’ cut material that cannot be reused on-site will be generated during the large-scale excavation operations. What is the ultimate fate of this material? Should it need to be disposed of off-site, provide information in the design plan to ensure that the Department’s Management of Fill Policy will be followed.

Response:

We do not anticipate disposing of the cut material off-site. Rather, we anticipate that the redbed-derived clay (colluvium) will be used to construct the practice field area and will be



retained by the mass-gravity reinforced portion of the slope which will be constructed of the cut sand and processed sandstone cut from the top of the site. The final height of the reinforced slope can be adjusted, up or down, to account for possible variations. In addition, the approximate 4H:1V wedge located at the intersection of the reinforced slope and bedrock can be adjusted to accept additional compacted redbed-derived fill if necessary.

The current development plans also call for an approximate 10-foot undercut of sand or sandstone beneath planned roadways, parking lots, and the building. This will reduce the level of effort to construct utilities and foundations in the hard sandstone bedrock that will be exposed after the initial ridge-top cutting. The amount of undercutting to use up the redbed-derived soil can also be varied as needed in the parking/driveway areas. In addition, some variation in the planned building undercut may also be possible, although the specific case would need to be evaluated at that time. In the highly-unlikely event that some volume of cut material cannot be reused on-site, the District will ensure compliance with the Department's Management of Fill Policy.

- m. Provide information on a cut/fill estimate for the site. If imported fill will be needed, provide details on the source of this material and how the developer intends to be compliant with the Department's Management of Fill Policy.

Response:

The design of the site is to be a balanced cut and fill project with no import or export of fill material. We have included with E & S Module 1 a spreadsheet which shows the cut and fill grading volumes per each E & S Plan Stage. The QVSD team has specified design options to control and balance the amount of cut and fill needed for development. If the aforementioned controls do not suffice, QVSD has the option to lower or raise the final elevation of the school, the final elevation of the practice field, and the pavement undercuts, to reach the intended balance.

- n. Will interim material stockpiles be needed during construction? If so, provide information on the amounts and storage location areas on-site.

Response:

Interim material stockpiles will be needed during construction, and the specifications identify areas (within 20 feet of slope tops) that shall not be loaded with soil stockpiles. We have shown on the E & S Plan Stages locations for soil stockpiles and a topsoil stockpile. Beyond that limitation, the location of stockpiles is a means and methods question that will be determined by the contractor, based on its intended sequencing of construction activities, and will be subject to review by the District's engineer.

- o. Ensure that all steps of the grading process that must be overseen by owner's geotechnical engineer are identified in the construction sequence as critical steps/stages.



Response:

In its land development approval, Leet Township required, and the District agreed, to have the designer of the RSS and MSE walls on site during construction, in order to approve the proposed fill materials and provide full-time observations of the MSE walls, construction. The construction drawings and specifications completed to date identify the activities that must be observed and documented by the District's geotechnical engineer.

- p. On the Field Exploration Plans (Figure 2 and 3) the symbol "B-XX" is listed in the legend with two different associated definitions (Proposed Supplemental Test Boring Number and GBBE Boring Number Drilled July 19, 2023 to August 4, 2023). Revise.

Response:

At the time of Report II, there was still a round of test drilling yet to be completed, but the intent was to show Leet Township, roughly, where we planned to drill in the next phase of work. That plan has since been adjusted based on minor design changes and information that appeared desirable at that time. We are attaching the revised Field Exploration Plans for your use (See Section 8-H Field Exploration Plan). This plan reflects all the drilling completed to date, and resolves the ambiguity noted in the Department's comment.

- q. Figure 3 legend is missing the legend identification for the black cross hair symbol and for the cross-section symbol. Revise.

Response:

The corrections are made on the attached updated Field Exploration Plans See Section 8-H Field Exploration Plan).

- r. The solid and dashed blue lines used in Figures 2 and 3 is not identified in the legends. Revise.

Response:

The solid and dashed blue lines in Figures 2 and 3 are the outline of the proposed building location and are labelled on the figures and legend.

- s. The submitted grading plan is incomplete, as all the grading associated with Phase 6 is not provided and some draft grading is not shown. Provide revised intermediate and final grading plans.

Response:

We have revised the intermediate and final grading plans as requested and now have eleven E & S Plan grading stages. (See E & S Plan Grading Stage 1 through 11).



- t. In some areas, significantly deep excavation is proposed. Ensure that the E&S plans sufficiently provide direction on how this will be safely done to prevent potential sidewall and slope failures.

Response:

We have revised the intermediate and final grading plans as requested and now have eleven E & S Plan grading stages. These E & S Plan grading stages reflect the proposed undercut contours per the slope and wall designs prepared by GBBE. (See E & S Plan Grading Stage 1 through 11 and see Section 8 – Geotechnical Exploration for Geotechnical Construction Drawings).

- u. Modelling of Cross-section G—G is not provided. Revise and resubmit the slope modelling.

Response:

Modeling of the area addressed by the location of cross-section G-G (now cross-section DB1-DB1) is part of the design/build package prepared for the soil nail wall. (See Section 8-C High Side Cut Geotechnical Construction Drawings).

- v. On the Phase 4 Bulk Grading Plan I (BG-4), the associated grading for the outlet culvert for SWMF-1 and 2 extends significantly into the proposed slope undercutting for the toe of the slope construction for the upper track area. Also, this culvert is proposed to outlet directly into an exposed construction area (shown below). How will this configuration be executed in the field in a manner that will prevent stormwater discharge directly into the proposed keyway and will prevent the likely erosion that will result during interim grading operations if constructed as designed?



Response:

This comment no longer applies due to the changed location of SWMF 1 and 2.



- w. In the screen shot clipped from BG-5/6 (shown below) there are multiple elevation labels that are inconsistent with one another. Revise.



Response:

We have combined the bulk grading plans with the E & S Plans and now there are eleven E & S Plan grading stages. We have made sure the elevations on the Stage E & S Plans are consistent to each stage. (See Stage E & S Plans 1 through 11).

- x. In cross-sections with anticipated loading from roads or structures, modelling of load surcharge is modelled in some cross-sections and not others. Provide information on why the surcharge was omitted in some modelling.

Response:

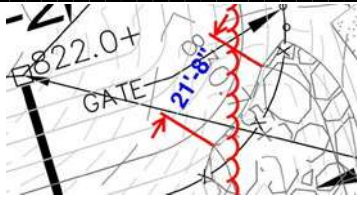
The goal of Report II was to show that the reinforced slope gravity wall system can be designed to meet global stability, which is the first step in design. The uniform loads were applied to the highest walls/worst case and submitted to Leet Township and Ackenheil for review. The three conditions with the added surcharge were at QQ 85 feet high on redbed bedrock, BB 150 feet high on more competent bedrock and redbed bedrock, and RR which was 180 feet high bearing on both types of bedrock. These were clearly the worst cases.

- y. In cross-section B—B and others, a 250 PSF surcharge is used for the road and for the area of the proposed track. It seems unlikely that the load from the driveway and the load from a large structure would both have 250 PSF associated with each. Provide a discussion as to why this surcharge value was used and what feature it is representing.

Response:

With respect to global slope stability, FHWA recommends modeling traffic loads as a uniformly applied load of 250 pounds per square foot (PSF). The entrance road accommodates cars, buses, and truck traffic. In our experience, the track and practice field will also routinely experience traffic from maintenance vehicles and heavy equipment.

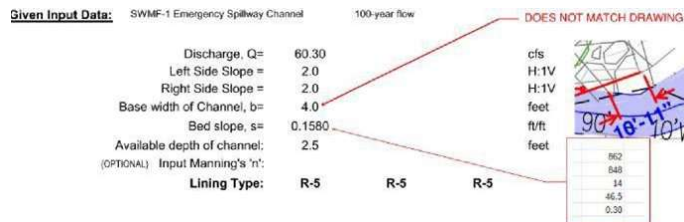
- z. When the Geotechnical issues are adequately resolved, please provide a final Geotech report and updated final grading plan drawing set with the geotechnical recommendations properly translated into the construction plans. The Geotechnical report is to be reviewed in tandem with the Erosion and Sedimentation Pollution Control construction plans to ensure the plan



Response:

The location of the proposed sediment basins and two stormwater management facilities have changed. The project will only have Sediment Basin SB-1 which has a 50' wide emergency spillway. Sediment Basin SB-1 will be converted to SWMF-2 with the same 50 wide emergency spillway. Proposed stormwater management facility SWMF-1 is now an underground detention facility. (See Stage E & S Plans attached with E & S Module 1 and PCSM Plans attached with NPDES Module 2).

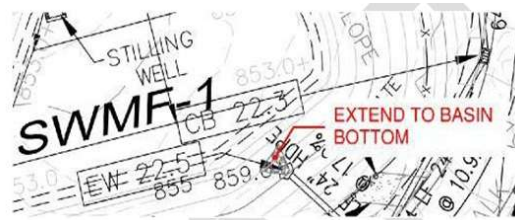
- §102.4(b)(5)(ix), §102.8(f)(9): The Base width of Channel, b and Bed slope, s values used the Trapezoidal Channel Analysis design worksheets for the basin emergency spillway channels do not match what is depicted on the plan drawings for each basin. The spillway for SWMF-1 design values used for the width and slope are 4.0-ft and 15.8% for width and slope, respectively. However, the values estimated from the drawings provided are approximately 11-ft and 30%. Please revise each basin spillway channel designs to be more consistent with what will be constructed.



Response:

The location of the proposed sediment basins and two stormwater management facilities have changed. (See new design drawings and design calculations for emergency spillway in E & S Module 1 and NPDES Module 2).

- §102.4(b)(5)(ix), §102.8(f)(9): Please extend each proposed riprap apron entering a basin to the toe of the basin cut/fill slope on both E&S and PCSM drawings. Please revise.

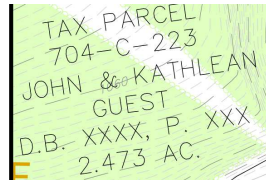




Response:

The location and design have changed for the two proposed SWMF. (See new design drawings and design calculations for emergency spillway in E & S Module 1 and NPDES Module 2).

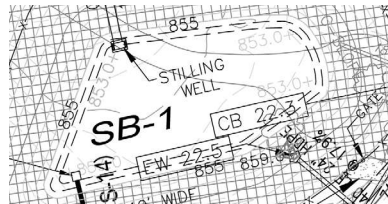
7. §102.4(b)(5)(ix), §102.8(f)(9): The Deed Book and Page Number of Tax parcel 704-C-223 show up on both the PCSM and E&S plan drawings as all Xs. Please revise.



Response:

The property information shown on the plans has been updated. (See new design drawings in E & S Module 1 and NPDES Module 2).

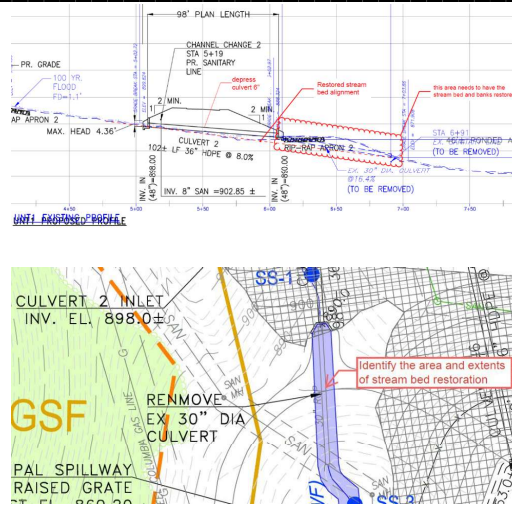
8. §102.4(b)(5)(ix), §102.8(f)(9): What do the two bold dashed lines represent at the interior base of the sediment basin SB-1/MRC stormwater basin SB-1. Please revise and/or explain.



Response:

The previously submitted PCSM104A "PCSM Plan Sheet 1 of 4," the dashed lines indicate the bottom and top contour surfaces of the soil media in the proposed MRC pond. The location and design have changed for the two proposed SWMF. (See new design drawings and design calculations in NPDES Module 2).

9. §102.4(b)(5)(ix), §102.8(f)(9): Review of the existing and proposed profiles for the removal of the 30-inch diameter culvert and the placement of the proposed Culvert #2, has revealed thought and consideration to the restoration of the stream bed and proper alignment of the culvert #2 and associated riprap apron has not taken place. Please revise and provide appropriate details and construction sequence steps related to each, the culvert placement and the stream bed restoration. Identify the area and extents of the stream bed restoration on the E&S and PCSM plan drawings. Please revise.



Response:

The stream profile for UNT1 has been updated to depict the area and extent of the proposed stream restoration. The construction sequence has also been revised to appropriately describe the steps for culvert removal and stream restoration. In addition, the stream restoration detail has been added to the drawings. (See new design drawings in E & S Module 1 and NPDES Module 2).

10. §102.4(b)(5)(ix), §102.8(f)(9): The floodway limits on all streams are depicted with widths less than 50-feet and in some cases appears to differ from what has been provided with the USACE/PADEP Joint (Joint) permit application. Please update the floodway limits shown as well as all other information provided within the plan drawings to reflect changes made during the Joint permit application review(s).

Response:

The floodway limits for the streams have been revised to align with those provided in the USACE/PADEP Joint Permit application. These limits were determined through a HEC-RAS analysis of the channels, as requested by the Department. (See new design drawings in E & S Module 1).

11. §102.4(b)(5)(ix), §102.8(f)(9): Please label and dimension all proposed riprap aprons and embankment spillways on both E&S and PCSM drawings. Please include lining information, including riprap sizing, if applicable.

Response:

Riprap aprons and spillways have been labeled and dimensioned on both the E&S and PCSM drawings. The lining and riprap sizing have also been added to the detail plans. (See new design drawings in E & S Module 1 and NPDES Module 2).

12. §102.4(b)(5)(ix), §102.8(f)(9): The CADD drawing quality provided on each sheet of both the E&S and PCSM plans, including the drainage area mapping within the reports is incredibly cluttered, and messy.

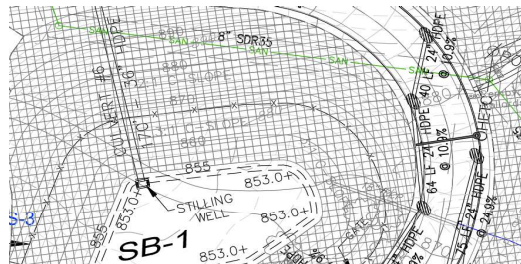
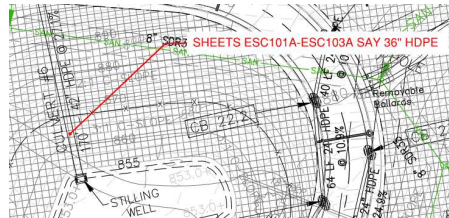


The drawings are littered with overlapping text, mix-matched font sizes styles, and excessive use of callouts at various angles, making the drawings difficult to read. Items proposed for demolition early within the E&S construction phases are still depicted within the later E&S and PCSM phases. Please revise.

Response:

The E&S and PCSM drawings have been revised to improve clarity of the information presented. (See new design drawings in E & S Module 1 and NPDES Module 2).

13. §102.4(b)(5)(ix), §102.8(f)(9): Sheet ESC104A depicts the Culvert #6 entering the basin SB1 as a 42" HDPE pipe. Sheets ESC101A-ESC103A depict this as 36" HDPE. The stilling well table on sheet PCSM300 indicates Culvert 6 as being a 36-inch pipe.



Response:

The location and design have changed for the two proposed SWMF. (See new design drawings and design calculations in NPDES Module 2).

14. §102.4(b)(5)(ix), §102.8(f)(9): To avoid error, please provide an appropriate PennDOT Type 5 precast box detail with dimensions as the stilling well detail on sheet PCSM300. As currently drawn, this box appears to resemble a 2-ft by 4-ft box without access to the interior, which is incorrect. Additionally, the table associated with this detail lists both H1 and Well Depth dimensions. The H1 dimension location is indicated on the detail, but the Well Depth dimension location is not. It is difficult to understand where the well begins/ends and where the H1 begins. Are these two items stacked? The details do not indicate this. Proper details depicting a more accurate representation of the Type 5 box, with access ladder rungs are available online and should be considered.



Response:

The stilling well is no longer being proposed for this project.

15. §102.4(b)(5)(ix), §102.8(f)(9): The basin cross section detail title label on sheet ESC304 is blank and “Not” in “Not to Scale” text is misspelled.



Response:

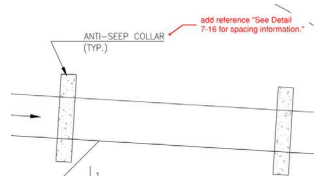
The detail title has been revised. The location and design have changed for the Sediment Basin SB-1. (See new design drawings and calculations in E & S Module 1).

16. §102.4(b)(5)(ix), §102.8(f)(9): Please show and provide embankment impervious core information within the basin cross section detail on sheet ESC304.

CEC Response:

The above-ground stormwater detention facility (SWMF-2) has been relocated on the site to avoid impacting the existing stream and wetlands riparian buffer. The relocated detention facility bottom and embankment is now being constructed by cutting into the in-situ material, which consists of rock and clayey material. Since the detention facility embankment is located entirely in cut and fill material is not required to construct the embankment, an impervious core is no longer being proposed.

17. §102.4(b)(5)(ix), §102.8(f)(9): Please add the following reference "See Detail 7-16 for spacing information." to the anti-seep collar callout within the basin cross section detail on sheet ESC304.



CEC Response:

In response to Department and ACCD comments, antiseep collars have been replaced with a sand diaphragm. Please refer to the Stormwater Detention Facility Basin (SWMF-2) detail on Sheet C458 – Post-Construction Stormwater Management Details.

18. §102.4(b)(5)(ix), §102.8(f)(9): The stilling well detail on sheet PCSM300 indicates a 12-ft wide R-5 Rip-Rap [PS13.1] apron is to be placed around the stilling well inlet box. The plan view drawings neither

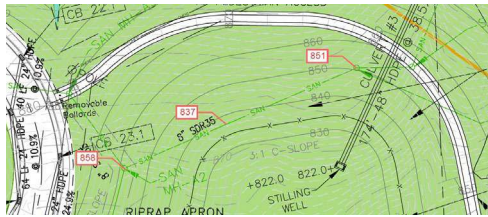


mention nor indicate an apron to be placed around the stilling well of either basin. Please depict this apron to scale on the plan drawings.

Response:

The stilling well is no longer being proposed for this project.

19. §102.4(b)(5)(ix), §102.8(f)(9): It is not clear how the proposed sanitary line cutting through basin SB2/SWMF-2 cut slope will be constructed and accessed once constructed. There is a ~18-20-ft surface elevation sag at the midpoint of the line between manholes MH-B1 and MH-A2. This will result in the need for excessively deep manholes to be constructed within the steep slopes. Consider placing the sanitary line(s) within the paved roadway/rights-of-way, easing construction and future access.



Response:

The location and design have changed for the two proposed SWMF which changed the location of the proposed sanitary sewer line. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

20. §102.4(b)(5)(ix), §102.8(f)(9): The proposed grading linework is at times difficult to differentiate from the existing grading. The sheets appear to depict the proposed grading contour linework as a lighter color than the existing grading contour linework. In addition, the proposed green vegetation hatching color obscures and makes it much harder to see other drawing information. Please consider lightening the hatch color, increase the opacity, or eliminate it all together. This vegetation information only needs to be depicted once and can be easily displayed on a landscaping/planting plan (not provided) depicting proposed plantings throughout the site. Please revise.

Response:

The plans have been revised in accordance with discussions from the 1/20/2026 meeting between the Department and the District, during which the Department provided clarifying information for this comment.

21. §102.4(b)(5)(ix), §102.8(f)(9): Please update the drainage divide line to represent the later E&S phase and PCSM phase drainage patterns. As depicted, it no longer represents the drainage patterns of these phases.



Response:

The drainage divide for post development has been added to the PCSM drawings. The location and design have changed for the Sediment Basin SB-1 and the two proposed SWMF. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

22. §102.4(b)(5)(vii), §102.8(f)(7): Please include detailed construction sequences for each of the proposed BMPs. See the 2006 Pennsylvania Stormwater BMP Manual, chapter 6, BMP 6.4.4: Infiltration Trench and BMP 6.4.5: Rain Garden/Bioretenention for specifics on the construction of each BMP. Please provide.

Response:

Detailed construction sequences have been added for each proposed BMP in accordance with the requirements of the 2006 Pennsylvania Stormwater BMP Manual. (See new design drawings, calculations, and details in E & S Module 1 and NPDES Module 2).

23. §102.4(b)(5)(viii), §102.4(b)(5)(ix) §102.8(f)(8), §102.8(f)(9): Each basin needs to be provided with a specific plan/profile detail calling out appropriate lengths, widths and other related dimensions, so each can be properly constructed. This is especially important due to the random shape and size of each basin footprint. Please provide or explain why this information is not needed.

Response:

Plans and profiles have been prepared for the sediment basin SB-1 and the two SMWF. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

E&S Comments

24. §102.4(b)(5)(vii): The Sequence of BMP Installation and Removal on Sheet ESC500 should specify the completion of the proposed E&S BMPs, (basins, traps, channels, outlet protection, etc.), prior to any general earthmoving and clearing/grubbing within a specific work area. Please revise.

Response:

The Sequence of BMP Installation and Removal on Sheet ESC500 has been revised to clarify that all applicable E&S BMPs (including sediment basins, sediment traps, diversion channels, and outlet



protection) will be installed and stabilized prior to the initiation of clearing, grubbing, or general earthmoving activities within each respective work area.

The sequence now reflects a phased approach, requiring perimeter controls and downslope BMPs to be constructed first, followed by installation of sediment control facilities before any disturbance occurs upslope. Additional notes have been added to emphasize that no earth disturbance will begin in a given area until the required BMPs for that area are in place and functioning. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

25. §102.4(b)(5)(vii): Stage 1, item 15 simply states “Excavate Sediment basins SB-1 and SB-2. Install principal and emergency spillways. Install stilling basin, Culvert 6 and Culvert 3.” Item 18 simply states “Install Culvert 5 with riprap apron and grade new driveway access. Critical stage.” The construction sequence should describe the proper methods of the embankment, and culvert placement construction and stabilization (in detail) or refer to the specifications provided elsewhere on the plan drawings. Each of these items should be described in greater detail. Details provided pertaining to each should be referenced. Discussions including but not limited to the embankment compaction, impervious core construction, lift height, culvert imbedding, flow bypass, etc. should be provided. Please provide or explain why this information is not needed.

Response:

The construction sequence has been revised with more detail descriptions per each Stage E & S Plan. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

26. §102.4(b)(5)(vii): With so many basins proposed at this site, it is likely springs will be encountered during the basin construction. Please discuss encountering springs during the basin embankment construction in the construction sequence. Per the 2012 Pa E&S Manual, springs encountered in the foundation area of a basin embankment should be drained to the outside/downstream toe of the embankment with a drain section two feet by two feet in dimension consisting of PennDOT Type A sand, compacted by hand tamper. No geotextiles are to be used around the sand. The last three feet of this drain at the outside/downstream slope should be constructed with AASHTO #8 material. Other methods of draining spring discharges may be accepted on a case-by-case basis. Please provide.

Response:

Details for the slope construction bench drains are shown on the Geotechnical Construction Drawings for the RSS and MSE Walls. The proposed bench drains will collect and convey any spring encountered during excavation. (See Section 8-D-1 through 5 MSE Wall Geotechnical Construction Drawings and Section 8-E Reinforced Soil Slope Geotechnical Construction Drawings)

27. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Please provide a Worksheet #20 for the proposed aprons.



Response:

Worksheet #20 has been added to both the E&S and PCSM calculations. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

28. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Outlet protection aprons have not been proposed for several storm pipe outfalls, citing “minimal flow. Riprap apron not needed.” It is unclear how erosion potential does not exist downslope of a 15” storm sewer outfall. Typically splash blocks at a minimum are used for roof leaders. Please demonstrate that flows from the culverts and roof leaders will not cause erosion in the downstream areas. Please provide.

Response:

Rip-rap aprons have been designed for each storm pipe and culvert outfall and details for each have been added to the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

29. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The culvert connected to EW22.5 shown on sheets ESC104A and PCSM100A is depicted as a 24-inch HDPE, however the table located on sheet PCSM300 indicates this upslope culvert as a 15-inch HDPE. Please review each culvert size and verify their sizes are properly identified. Please revise as needed.

Response:

The pipe proposed is a 15” HDPE and has been labeled on the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

30. §102.4(b)(5)(ix): End wall EW1.12 shown on sheets ESC104C and PCSM100C is depicted with a downstream outfall riprap apron, however the table located on sheet PCSM300 indicates that no riprap apron is proposed for this outfall. Please review each proposed end wall and corresponding outlet and make sure they depict information consistently. Please clarify.



EW1.12	15	HDPE	MINIMAL FLOW. RIPRAP APRON NOT NEEDED	
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Response:

Rip-rap aprons have been designed for each storm pipe and culvert outfall and details for each have been added to the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

31. §102.4(b)(5)(vii), §102.4(b)(5)(viii), §102.4(b)(5)(ix): Please include channel 1 and 2 within the construction sequence. The channel calculations for Channel 1 does not appear to include the total drainage area between Channel 1 and Channel 2 (approx. 25-ac), which is likely to be the worst-case scenario for Channel 1. It is unlikely the upslope grading and construction will be complete when Channel 2 is constructed, resulting in the entire combined drainage passing through Channel 1. Additionally, each of the channel (temp & perm) design calculations provided appear to have averaged slopes. Per the 2006 Pa E&S Manual, Chapter 6 - Runoff Conveyance BMPs, Channels, Design Procedure, Item #3.: (Channel) "slopes may not be averaged. For example, Channel 1, slopes vary from 34.5%, 19.4%, 20.8%, 18%, 12.8%, 22.4%, 24.8%, 31.5%, 29.6%, 23.6%, 14.7%, and 9.7%. Channels 2 and 3 slopes are also inconsistent with what has been provided within the design calculations, and in some cases far exceed the slopes used for design. Segments and lengths should be indicated on the drawing and within the design calculations, so it is clear where each segment begins and ends. This applies to both proposed temporary and permanent channels.

If a proposed channel will intercept significant changes in slope, such as would require a larger channel size or different protective liner:

- a) Design each segment of the channel separately, or
- b) Design the entire channel with sufficient capacity for the gentlest slope and a protective liner suitable for the steepest slope.

Response:

Proposed collection and permanent channel profiles have been provided on the plans with the various channel slope changes labeled. Channel calculation spreadsheets have been added for each slope change showing the lining type, dimensions and shear. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

32. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Nearly every proposed compost filter sock is shown crossing multiple contours. Please review each proposed CFS sediment barrier and adjust each sock so that is shown on grade, with proper up-turns to avoid forming low points or diverting concentrated flow.

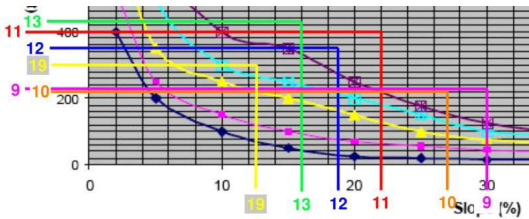
Response:

The locations of the proposed compost filter socks have been revised to follow along the existing contour. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

33. §102.4(b)(5)(viii): A spot check of compost filter sock slope percents and slope lengths indicated on Standard E&S Worksheet #1, for socks 9 through 13 and 19, appear to be incorrect. Each design



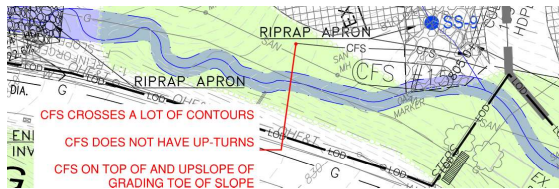
appears to exceed the slopes/lengths for 32-inch for socks 9-13 and 24-inch sock 19. Consider the use of a sediment trap or other BMP with appropriate capacity for use within the watershed of socks 9-13. Review all CFS sizing and ensure that the maximum slope lengths are used for sizing in all areas. Update the drawings and provide revised supporting calculations.



Response:

We have labeled all the proposed compost filter socks by stage and shown the flow path on the Stage E & S Plans. We also have included spreadsheets that calculate the flow path slopes, size of sock and sock slope length capacity for each CFS flow section. (See new design drawings and calculations in E & S Module 1).

34. §102.4(b)(5)(viii): Spot checks of CFSs 14, 15, 17, and 18 show in addition to crossing contours, these socks do not depict appropriate up-turned ends, assuring adequate sediment laden stormwater storage. Please revise. Grading is depicted downslope of CFS # 15. Please revise.



Response:

We have labeled all the proposed compost filter socks by stage and shown the flow path on the Stage E & S Plans. We also have included spreadsheets which calculate the slopes of the flow path, indicate size of sock and sock slope length capacity for each section. (See new design drawings and calculations in E & S Module 1).

35. §102.4(b)(5)(viii): Standard E&S Worksheet #1 lists different sock sizes/designs for “Ex” and “Pr” (existing and proposed) conditions. It is not clear when the use of one end and the other begins, and the CFS notation on the drawings do not differentiate between the two making it impossible to know which sock is being depicted. Furthermore, it is highly unlikely the contractor be willing to traverse the site perimeter, swapping out a larger 32-inch sock (existing phase) for a smaller 24-inch sock (proposed phase). The shrink-wrapped limits of disturbance provided on the drawings severely limit such a feat, and the expense of doing so will likely be cost prohibitive. Please eliminate the use of both the “Ex” and “Pr” sock designs and propose a single worst-case scenario sock.



Response:

We have labeled all the proposed compost filter socks by stage and shown the flow path on the Stage E & S Plans. We also have included spreadsheets which calculate the slopes of the flow path, indicate size of sock and sock slope length capacity for each section. (See new design drawings and calculations in E & S Module 1).

36. §102.4(b)(5)(viii): The drainage area mapping provided for the proposed culverts (Culverts Post Development Conditions – Figure C8) is too cluttered and virtually unreadable. Please revise.

Response:

The drainage maps have been revised in accordance with discussions from the DEP/QVSD Department/District meeting held on 1/20/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

37. §102.4(b)(5)(viii): The Standard E&S Worksheet #13 indicates an Elevation at the Top of the Dewatering Zone of 861-ft for sediment basin SB-1. The non-named cross section table on sheet ESC304 indicates this elevation to be 862-ft. Please revise.

Response:

The location and design of the proposed sediment basins have changed. (See new design drawings and calculations in E & S Module 1).

38. §102.4(b)(5)(viii): The Standard E&S Worksheet #13 indicates average bottom width and length of 33-ft and 200-ft respectively for sediment basin SB-1 and 44-ft and 180-ft respectively for sediment basin SB-2. As drawn, the basin bottom widths and lengths were measured to be approximately 53-ft and 100-ft respectively for sediment basin SB-1 and 90-ft and 95-ft respectively for sediment basin SB-2. Please revise each accordingly.

Response:

The location and design of the proposed sediment basins have changed. (See new design drawings and calculations in E & S Module 1).

39. §102.4(b)(5)(viii): The Standard E&S Worksheet #13 indicates a flow length of 300-ft and 270-ft for sediment basins SB-1 and SB-2 respectively. As drawn, flow lengths were measured to be approximately 232-ft and 187- ft respectively. Please revise each accordingly.

Response:

The location and design of the proposed sediment basins have changed. (See new design drawings and calculations in E & S Module 1).



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40. §102.4(b)(5)(viii): The Standard E&S Worksheet #13 indicates a flow length to width ratio 6:1 and 4:1 for sediment basins SB-1 and SB-2 respectively. Due to the short circuiting of the flows, these are significantly more than what was measured from the plan drawings. Without considering the short circuiting, these flow width to flow length ratios were measured to be approximately 4.6:1 and 3.7:1 respectively. Please revise each accordingly.

Response:

The location and design of the proposed sediment basins have changed. (See new design drawings and calculations in E & S Module 1).

41. §102.4(b)(5)(viii): The Standard E&S Worksheet #13 indicates Silt Curtains are proposed for use in lieu of a forebay; however, silt curtain details have not been provided on the plan drawings, nor have the curtains been identified on the plan drawings. Please explain and or revise as necessary.

Response:

A baffle is proposed for new Sediment Basin SB-1, and the design length of flows has been added to the E & S Plans and to Worksheet #13. (See new design drawings and calculations in E & S Module 1).

42. §102.4(b)(5)(viii): Zeros have been entered as the Emergency Spillway Capacity indicated on Standard E&S Worksheet #12. This appears to be incorrect. Please explain and or revise as necessary.

Response:

In accordance with Leet Township Ordinance 2018-4, the stormwater facility is required to manage the 100-year event without discharge through the emergency spillway. As such, the predicted flow through the emergency spillway for the less-intense 25-year storm event at Elevation 5, as shown on Worksheet #12, is zero. 100-year storm event calculations for the emergency spillway are provided in the E & S Module 1. Emergency spillway details are shown on the E & S Plans. (See new design drawings and calculations in E & S Module 1).

43. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Typical broad based dips are depicted along the Camp Meeting Road access grading, however information as to how runoff from these dips will be captured and controlled has not been provided. All discharges should be to stable drainage courses, or to well-vegetated areas. Sediment removal efficiency for broad based dips is very low therefore, consideration should be given to providing a temporary channel directing runoff to one of the sediment basins, or other BMP. Please revise or explain why this additional information is not needed. Currently no BMP controls are being provided beyond the broad-based dips. As depicted, each broad-based dip is perpendicular to the flow direction. When runoff impacts this structure, it will be directed to both ends of the road. The dip should be depicted angled/in-sloped such that it will direct runoff to one side, preferably a side where it can then be connected to a channel or other BMP.



Response:

We are not proposing any broad based dips for E & S BMP's on the project site.

44. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The proposed permanent access from the Camp Meeting Road has an approximate 11% slope and has large upslope drainage areas. Per the 2012 E&S Manual, "Due to the nature of broad-based dips, they should not be constructed on roads with grades exceeding 10%. Where access roads exceed 10% gradients, in-sloping or other deflection devices should be used to control runoff." A roadway graded with an in-slope, at least temporarily would allow runoff to be captured by a channel and directed to sediment trap or other BMP. Additionally, check-dams could be used along this channel to aide in control of the runoff. If an in-slope option is used, include slope arrows to indicate the in-sloping direction. As currently depicted, channels would need to be provided on both sides of the access roadway Please revise the plans to include adequate access roadway BMPs along the entire length of the access roadway. Provide information within the construction sequence, making it clear to the contractor how this access roadway is to be constructed, both temporarily, and during the final construction phase.

Response:

We are not proposing any broad based dips for E & S BMP's on the project site. A rip-rap collection channel C3 is proposed along the northern side of the 10% slope lower drive roadway to control erosion. The grading for the roadway will direct all runoff towards collection channel C3. Discharge from C3 will convey any sediment laden runoff to collection channel C2 which discharges into sediment basin SB-1. (See new design drawings and calculations in E & S Module 1).

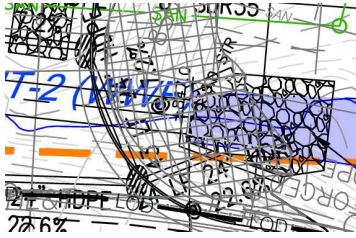
45. §102.4(b)(5)(ix): To aide in de-cluttering the drawings, please remove outdated previous phase BMPs, when depicting the final E&S phase. For example, Rock Construction Entrance # 4 will no longer be accessible once the new drive access off of Camp Meeting Road. Please revise:



Response:

The drawings have been revised in accordance with discussions from the Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1).

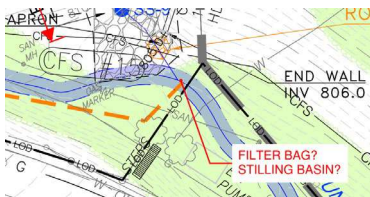
46. §102.4(b)(5)(ix): The erosion control blanket (ECB) hatching scale/color should be toned down. As currently depicted, it obscures much of the important basin construction related information. In addition, as currently depicted, it is shown on top of the Culvert #5 riprap apron. Please revise.



Response:

The drawings have been revised in accordance with discussions from the Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1).

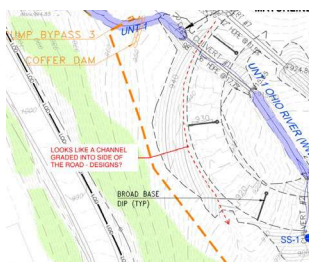
47. §102.4(b)(5)(ix): Provide a properly designed and sized stilling basin or other equivalent anti-scour BMP at the Culvert 5 pumped bypass outlet.



Response:

A rip-rap apron has been added to the plans, along with a detail showing an appropriate anti-scour BMP. (See new design drawings and calculations in E & S Module 1).

48. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The access road grading across and south of Culvert #1 appears to depict a channel freely discharging uncontrolled stormwater runoff towards the existing access road upslope of UNT-1. Designs do not appear to have been provided for this channel. Please provide or explain why this information is not needed.

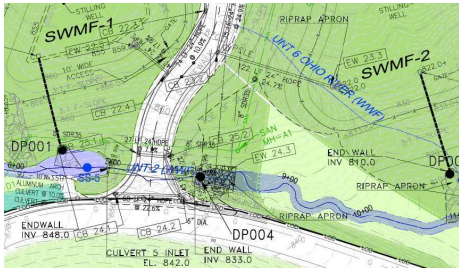


Response:

The grading has been revised, and the channel has been removed. The area behind the curb is now sloped toward the roadway. (See new design drawings and calculations in E & S Module 1).



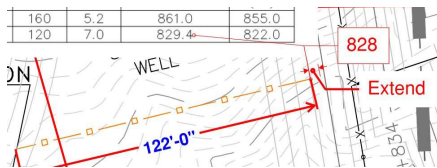
49. §102.4(b)(5)(ix): The PCSM plan drawings are very cluttered and messy. They still depict many items proposed for removal during the demolition phase of the project. For example, the existing guide rail crossing the proposed driveway entrance off Camp Meeting Road, as well as the UNT 6 which is to be eliminated through the construction of the basin SWMF-2 are still depicted on both the PCSM and E&S drawings. Please remove all features to be removed during the demolition and erosion and sedimentation control phases, as these items clutter the provided mapping, making it difficult to read. These include streams, utilities, structures, and other man-made items. Please revise.



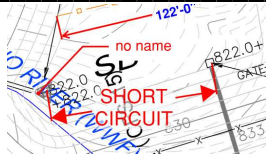
Response:

The drawings have been revised in accordance with discussions from the Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1).

50. §102.4(b)(5)(ix): The sediment basin baffle line types should be identified on the plan view drawing legends. Additionally, the way they are depicted on the plan drawings, it is difficult to understand the orientation with which they are to be installed. The baffle for SB-2 appears to be randomly placed within the center of the basin. One end of the baffle should be placed such that the top of the baffle terminates at the basin embankment. As currently depicted, the baffle extends to the 828 contour on the right side, leaving a gap and allowing flows greater than 828 in elevation to escape and pass along both sides of the baffle. This baffle should be depicted farther to the right and extend to the approximate 829.4 elevation. See screenshot below:



Additionally, sediment basin SB-2 still is being short circuited by the flows entering into the basin via unnamed riprap access road. Please revise.



Response:

The location and design for the project sediment basin have changed. The project has only one larger sediment basin SB-1. A baffle is proposed to minimize any short circuit of flows entering the basin from the 36" collection channel C1 culvert. The baffle is 115' long and 7' height with a bottom elevation of 855.00 and top elevation of 862.00. The baffle terminates into the basin embankment at elevation 862.00. (See new design drawings and calculations in E & S Module 1).

51. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The permanent riser crest elevation for sediment basin SB-1 listed in the Standard Construction Detail # 7-2 (861.0-ft) in Module 1 and on sheet ESC304 differs from the elevation identified on the plan drawings (860.2-ft). Please revise.

Response:

The location and design for the project sediment basin have changed. The new riser crest elevation on the plans matches the elevation on Standard Construction Detail # 7-2 included in E & S Module 1. (See new design drawings and calculations in E & S Module 1).

52. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Please provide proper construction details for the proposed compost filter sock sediment trap.

Response:

The compost sock sediment trap detail #3-11 has been added to the detail drawings. (See new design drawings and calculations in E & S Module 1).

53. §102.4(b)(5)(ix): The proposed channel (Channel 1?) upslope of Culvert 3 is not labeled on sheet ESC101A. Please revise.

Response:

The location and design for the project sediment basin have changed. The project has only one larger sediment basin SB-1. Collection channel C1 has been labeled on the plans. (See new design drawings and calculations in E & S Module 1).

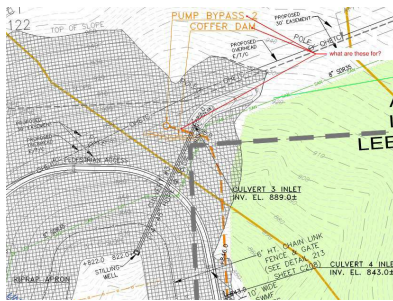
54. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Due to the steep placement slopes, please provide anchors for Culverts #3 and #6. Provide anchors for each culvert proposed being placed at a slope of 19% or greater. Include construction details within the plan drawings. Please revise.



Response:

Slope anchors have been added to pipes with slopes of 19% or greater, and the corresponding slope anchor detail has been included in the drawings. (See new design drawings and calculations NPDES Module 2).

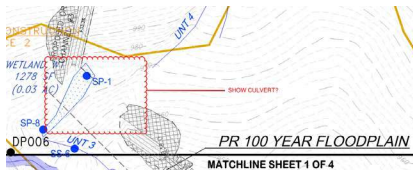
55. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Please explain the need for the coffer dam and Pump Bypass #2 to Culvert #4. As depicted, it appears the construction of collection channel #1 is being proposed prior to the construction of the sediment basin SB-2. Collection channels should not be constructed until after the completion of the sediment basin. Inlet/outlet structures entering and leaving the basin should then be constructed from downslope to upslope, eliminating the need for upslope bypassing.



Response:

The location and design for the project sediment basin have changed. We no longer propose the coffer dam and Pump Bypass #2.

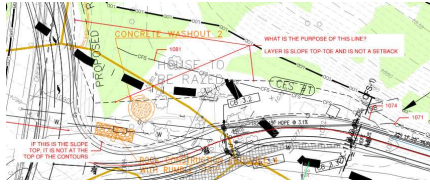
56. §102.4(b)(5)(ix): Please show the Culvert # 7 along with the Channel #3 grading on sheet ESC103B. Please revise.



Response:

The location and design for the project sediment basin have changed. We no longer are proposing culvert #7 and channel #3.

57. §102.4(b)(5)(ix): The CFS #1 linework on sheet ESC101B unidentified bold black dashed line that appears to arbitrarily terminate along the western limits of the site and extends east onto sheet PCSM100D. It is on layer "Slope Top-Toe", suggesting it relates to the grading. Please either identify this line within the legend or remove it if not needed.



Response:

The dashed lines represented top and toe of cut and fill limits and have been removed from the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

58. §102.4(b)(5)(ix): Provide the construction details for the proposed stream crossing(s). Reference the Joint USACE/PADEP permit application number on E&S and PCSM plan drawings. Identify each crossing included with the Joint Permit and provide a reference describing where to find each crossing's corresponding construction details. Please revise or explain why this information is not needed.

Response:

The Joint Permit references have been added to the E&S and PCSM plan drawings. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

59. §102.4(b)(5)(ix): Provide grading standard notes on the E&S drawings.

Response:

The grading standard notes have been added to the E&S drawings. (See new design drawings and calculations in E & S Module 1).

60. §102.4(b)(5)(viii): The drainage area maps are incredibly difficult to read and differentiation between BMP areas, and verification of the routing analysis provided is not possible. Less information is better. Every proposed improvement is not necessary to depict. Light poles, catch basins, roadways, roadway markings, buildings, utilities, grass & tree hatching, and callouts clutter the mapping. Consider providing only the information necessary to describe the stormwater conditions and their relationship with the routing analysis provided. Consider providing summary tables on the DA maps for each sub-drainage area that provide the corresponding routing hydrograph names, surface type acreages, and times of concentrations used within the analysis. The BMP facilities associated with each drainage area should also be identified within the mapping.

Response:

The drawings have been revised in accordance with discussions from the Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

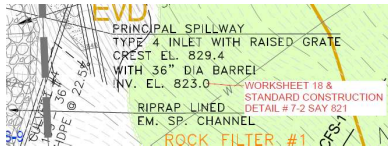


61. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Inlet/outlet protection or splash pads have not been provided for the proposed outlets and/or roof leader discharges into the proposed bioretention areas. (BP-1, BP-2, BP-3, BP-6, BP-7, BP-8) Please provide inlet protection or explain why these are not needed.

CEC Response:

The post-construction stormwater management design has been modified to include eight (8) underground MRC cells located throughout the site, including in the vicinity of the new high school building. The modified design includes connecting the building roof drains to the bypass diversion structures and then directly into the underground MRC cells. The roof drains will no longer be directed into the proposed bioretention areas. Therefore, outlet protection for the roof drain outlets is no longer necessary.

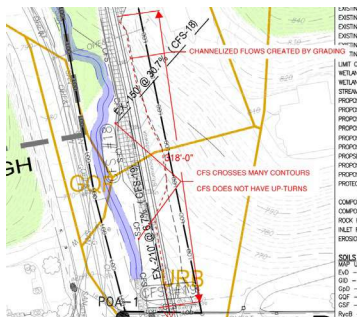
62. §102.4(b)(5)(ix): The plan drawings call the principal spillway barrel invert as 823.0-ft. Worksheet 18 and Standard Construction Detail # 7-2 each state this elevation as 821-ft.



Response:

The location and design for the project sediment basin have changed. The new riser crest elevation on the plans matches the elevation on Standard Construction Detail # 7-2 included in E & S Module 1. (See new design drawings and calculations in E & S Module 1).

63. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The proposed bituminous Sidewalk pathway north of and connecting to Camp Meeting Road is sloped at an average 12.5% for approximately 320-feet and is graded such that it will capture upslope runoff, channelize and discharge uncontrolled directly to Camp Meeting Road. Will this pathway grading need to meet ADA compliance? If yes, this may affect how runoff from this pathway can be directed. Please explain and/or revise.



Response:

This sidewalk is not part of the project and has been removed from the plans.



64. §102.4(b)(5)(ix), §102.8(f)(8), & §102.8(f)(9): The E&S, PCSM plan drawings and the PCSM Spreadsheet reference trees to be protected. How will these trees be protected? Tree protection must include incorporation into the property deed and be recorded as part of the PCSM Plan.

Response:

Temporary fencing has been added around existing tree areas within the limits of disturbance (LOD) that are to be protected. (See new design drawings and calculations in E & S Module 1).

PCSM Comments

65. §102.8(f)(7): Include sediment basin conversion into PCSM basins within the PCSM construction sequence. Please provide.

Response:

The construction sequence has been revised to include the conversion of the sediment basin SB-1 to SWMF-2 in Final Stage. (See new design drawings and calculations in E & S Module 1).

66. §102.8(f)(8): The Time of Concentration (Tc) calculations for each of the post construction TR55 Worksheets depict a Sheet Flow length of 150-ft in the post-construction conditions. Per Chapter 5 (Runoff Calculations) of the 2012 PA E&S Manual (pg. 108): “The maximum flow path length (L) for any disturbed area is 50 feet. It is unlikely that any sheet flow occurs in areas where active earthmoving is taking place, as well as previously disturbed areas that were not restored to approximate original contour. Therefore, the sheet flow equation should not be used for newly graded fill or cut slopes. Runoff from these areas should be considered shallow concentrated flow.” Please revise each of the post construction Tc calculations accordingly.

Hyd. No. 20
 POST to POA-6

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 150.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.33	0.00	0.00	50' MAX

CEC Response:

The post-construction Time of Concentration (Tc) calculations have been revised in accordance with Chapter 5 of the 2012 PA E&S Manual (pg. 108). The previously assumed 150-foot sheet flow lengths have been removed from all post-construction TR-55 worksheets and replaced with a maximum flow path length of 50-feet in disturbed areas. In addition, shallow concentrated flow has been used on newly graded fill and cut slopes.

67. §102.8(f)(8): Within the provided Appendix E calculations, it is noted that HSG B are utilized in post-construction conditions. Mass grading of sites typically degrades these soils by alteration of depth of fill/topsoil and compaction requirements for structural fill. Discuss how these HSG's are to be



maintained through grading and be sure to include this information in the E&S and PCSM Plans. It is suggested that all B soils be shown degraded to C or D as appropriate in post-construction conditions. Please revise.

CEC Response:

The post-construction stormwater management calculations have been updated such that HSG C soils are used in post-construction conditions. HSG B soils are used in post-construction conditions in locations where no construction activity is anticipated to occur, but HSG C soils are used in all proposed construction activity and permanent improvement areas.

68. §102.8(f)(8): The SWM Volume Storage curve number calculations provided throughout the stormwater report use weighted CN values to derive runoff volumes. Please note that per the 2006 Pa SWM Manual, a weighted CN is generally unacceptable for volume analysis due to the large error associated with averaging of initial abstractions for storms less than or equal to the 2-year/24-hour storm event. Curve numbers for impervious and non-compacted pervious areas must be separate from the analysis. Please revise.

CEC Response:

The stormwater management volume calculations have been revised using the standard PCSM spreadsheet and in accordance with the guidance in the 2006 Pennsylvania Stormwater BMP Manual. Weighted Curve Numbers (CNs) have been removed from the SWM volume storage analyses. Separate CN values are now used for impervious areas and non-compacted pervious areas in order to appropriately account for differing initial abstractions and runoff responses, particularly for smaller storm events (\leq 2-year/24-hour storm). All affected SWM volume calculations, supporting tables, and associated design documentation have been updated accordingly in the revised stormwater module.

69. §102.8(f)(8): As support of the areas being claimed, please provide cross sections/plan views of the Bed Area and Soil Bed Areas for each bioretention areas listed within the Appendix E SWM Volume Storage Calculations as it is unclear how these values were derived. Please provide.

CEC Response:

Cross sections and plan views of the Bed Area and Soil Bed Areas for each bioretention area listed within the Appendix E SWM Volume Storage Calculations is provided on the detail sheets contained within the Post-Construction Stormwater Management plan set.

70. §102.8(f)(8): Due to the use of underdrains within the MRC and SWMF-2 basins, the volumes claimed between the dewatering orifice and the basin bottom elevations, as provided within Appendix E SWM Volume Storage Calculations, are not valid. Please revise.



CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

71. §102.8(f)(9): The LOD linework on sheet PCSM100C is being crossed by the proposed grass surface cover and an unidentified bold black dashed line that appears to arbitrarily terminate within the sheet and extends east onto sheet PCSM100D. Please revise to keep the proposed surface vegetation change and grading limits within the limits of disturbance.



Response:

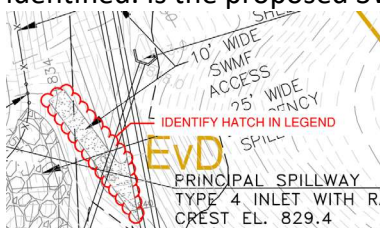
The shading on the drawings has been corrected. (See new design drawings and design calculations in NPDES Module 2).

72. §102.8(f)(9): It is not clear how runoff will enter into parking lot bioretention areas (BP-6, BP-7, & BP-8). The drawings and details do not provide curb cuts or other means of conveyance. Please provide.

CEC Response:

The post-construction stormwater management plan has been modified such that a majority of the site's stormwater runoff is directed to underground MRC cells. Based on this modified design approach, the only water that enters the bio-retention areas is the rainfall that collects within each area. The post-construction stormwater management calculations have been updated accordingly.

73. §102.8(f)(9): Please list and identify within a drawing legend each line type and hatch style, matching scale and intensity. The hatches used for the SWMF access and floodway limits have not been identified. Is the proposed SWMF access asphalt, concrete, gravel? Please revise.





CEC Response:

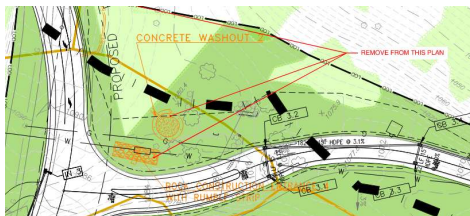
The access road to SWMF-2 will be a gravel access road. A hatch has been added to the plan set indicating this land cover. In addition, the gravel access road has been labeled on the plan sheets, and a detail has been added to the plan detail sheets.

74. §102.8(f)(8), §102.8(f)(9): Consider the use of check-dams along the permanent channels to aid in control of the runoff and obtain water quality volume.

CEC Response:

Check dams have been added to the permanent channels. Please refer to the C400 series of plans for locations and details of the proposed check dams.

75. §102.8(f)(9): Please remove the temporary E&S BMPs from the PCSM drawings.



Response:

The temporary E&S BMPs have been removed from the PCSM drawings. (See new design drawings and design calculations in NPDES Module 2).

76. §102.8(f)(9): It is unlikely the water and gas lines will remain following the reconstruction of the existing access roadway off of Camp Meeting Road (depicted within the above screenshot). Consider revising the existing utilities to be aligned with the proposed grading and roadway alignment. Additionally, unless the pavement is proposed to remain post construction, the pavement linework of the vacated portion of Camp Meeting Road should not be depicted during this phase. It just clutters further an already cluttered drawing.

Response:

The existing water line will remain in the old Camp Meeting Road roadway. The gas line is being relocated by the gas company to the western lane of the old Camp Meeting Road. The abandoned portion of the old gas line will be dug up during the excavation and construction of the fill slope for the new roadway alignment. We have removed the old gas line from the E & S Plans and PCSM Plans. The old Camp Meeting Road R/W will be abandoned by the County but will be excepted by Leet Township so that all former utility easements will continue. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

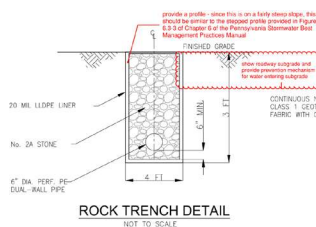


77. §102.8(f)(9): Please identify Camp Meeting Road on each plan sheet it appears on. (PCSM100B)

Response:

Camp Meeting Road is labeled on each plan sheet. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

78. §102.8(f)(9): Please revise the rock trench detail to show the roadway cross section, including the subbase and provide prevention mechanism for water entering the subbase. Additionally, provide a profile. Since this rock trench is on a 10% slope, the profile provided should be similar to the Figure 6.3-3 stepped profile provided in Chapter 6 of the Pennsylvania Stormwater Best Management Practices Manual. Proper measures should be taken to prevent water infiltrating into the subbase of impervious pavement. Consider placing the rock trench on the fill-slope side of the roadway, below the subbase layer, with a cut-slope side swale with catch basins and cross culverts discharging into the infiltration trench. Catch basin sumps and water quality filters can then be placed in the catch basins to be used as pre-treatment for the infiltration trench. Please revise.



Response:

We have removed the rock trench and detail from the project. A rip-rap collection channel #3 has replaced the rock trench. A profile and detail of the rip-rap collection channel #3 has been added to the E & S Plans and PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

79. §102.8(f)(9): The Typical Basin Drain detail on sheet PCSM102 references 6-ft thick sand layer. It is likely this is meant to read as 6-in thick. Please revise.

CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

80. §102.8(f)(9): Please provide a cap on the far/upstream end of the underdrain for the Stormwater Management Facility Section detail on sheet PCSM102.



CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

81. §102.8(f)(9): Please provide a Typical Basin Drain for the Stormwater Management Facility/MRC basin underdrain on sheet PCSM102. The Typical Basin Drain detail provided appears to be consistent with the bioretention basins, and not the two larger stormwater basins.

CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

82. §102.8(f)(9): Please include basin barrel pipe slopes within the table associated with the Stormwater Management Facility details on sheet PCSM102. Please provide or explain why this information is not needed.

Response:

The location and design for the project stormwater management facilities have changed. (See new design drawings and design calculations in NPDES Module 2).

83. 102.8(b)(1), 102.8(b)(3), §102.8(f)(10): Underdrains should not be utilized in infiltration basins. Caps, valves, and gates are not acceptable design features for BMPs which utilize infiltration for Volume Management and Water Quality credit. Proper infiltration testing should yield reliable results. In the event these BMPs require dewatering due to dysfunction, it is unlikely that underdrains will be reliably functional as the soils are likely clogged. If dewatering is necessary, it is more likely the contractor would and should employ a pump and filter bag. If effluent standards are a concern and pumping rate should be considered, include a proper pumping rate in the BMP maintenance. Please revise or explain why this is not necessary.

CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

84. §102.8(g)(2), §102.8(g)(6): The BMP Infiltration / Vegetated Area (SF) values provided on the PADEP PCSM Spreadsheet Volume Worksheet used to calculate the evapotranspiration ET Credit (CF) for BMP exceed the DEP estimated areas from the plan drawings. It appears the entire footprint of each bioretention BMP area, including embankments and cut slopes associated with each, are being claimed as available for infiltration, which is incorrect. Only the basin interior bottom of the basin/BMP



footprint area can be claimed for infiltration and/or evapotranspiration. Additionally, it is not clear where the basin bottoms are. Only Bio areas BP-1 and BP-2 provide grading identifying the extents of the basin footprints. The spreadsheets also provide Storage Volume (CF) values for these basins that appears to be inaccurate. Given the lack of identifiable grading and footprint information, it is impossible to verify these values as well.

Please revise each basin, identifying the basin bottom and top extents to allow verification of the BMP Infiltration / Vegetated Area and Storage Volume values provided. Please revise or explain why this information is not needed.

CEC Response:

Cross sections and plan views of the Bed Area and Soil Bed Areas for each bioretention area listed within the Appendix E SWM Volume Storage Calculations is provided on the detail sheets contained within the Post-Construction Stormwater Management plan set.

85. 102.8(g)(2), §102.8(g)(6): Provide information supporting the Non-Structural BMP Volume Credits on the PCSM Spreadsheet. The areas utilized for Tree Planting Credit should be specified on the plan drawings as PCSM SCM's. These areas should be properly designated, and maintenance requirements should be provided. Area's subject to street and road sweeping identified in the Maintenance Program should have similar documentation as noted about the Tree Planting Credit above and include calculations demonstrating the accuracy of the pollutant removal claimed. Provide planting plan(s) describing where, how, and what plantings will be planted and how they will be maintained.

CEC Response:

The Landscape Plan, prepared by LBA Landscape Architecture, has been included in the resubmission documents as a supplement to the Post-Construction Stormwater Management Plan. The Landscape Plan includes site plantings, bio-retention area plantings, riparian buffer plantings, and reforestation plantings. This plan is a part of the Post-Construction Stormwater Management Plan and will be recorded with the plan accordingly. In addition, the areas of reforestation utilized for Tree Planting Credit have been added to the Post-Construction Stormwater Management Plan (C400 series) and labeled as a PCSM SCM.

86. 102.8(g)(2), §102.8(g)(6): Please revise the Street and Road Sweeping as described within the Maintenance Program. Rather than "weekly or as needed", provide sweeping monthly from spring through fall, ending in late fall after the leaves have fallen, and restarting in early spring/late winter before the road salt and other debris is washed from the roadway surfaces by rain. Please revise or explain why this is not necessary.

CEC Response:

Street and Road Sweeping has been removed from the modified Post-Construction Stormwater Management Plan for the site.



-
87. 102.8(f)10): Revise the Maintenance Program to include the Rock Trench (aka: BMP 6.4.4: Infiltration Trench) Catch Basins and Inlets should be inspected and cleaned at least 2 times per year. The vegetation along the surface of the Infiltration Trench should be maintained in good condition, and any bare spots revegetated as soon as possible. Vehicles should not be parked or driven on a vegetated Infiltration Trench, and care should be taken to avoid excessive compaction by mowers.

CEC Response:

The Rock Trench (aka: BMP 6.4.4: Infiltration Trench) has been removed from the modified Post-Construction Stormwater Management Plan for the site.

NOI Comments

88. §102.8(f)(8): Given the extent of grading being conducted at this site, it is not clear the site can be constructed without the import of fill material. Please provide a cut/fill grading plan balance sheet with soil volumes identified. If fill material is needed for this project, please update item 12 of the NOI application as appropriate.

Response:

A cut/fill grading balance has been developed for the proposed site to evaluate earthwork quantities and determine the need for off-site material import or export. A cut/fill balance sheet has been prepared and added to the documents identifying total cut volumes, fill volumes, and net earthwork balance for the project.

Based on the revised grading analysis, the site earthwork has been evaluated to minimize the need for off-site material. Where minor import/export may still be required due to constructability constraints and final grading tolerances, these volumes have been identified in the balance sheet and clearly documented.

The NOI application, Item 12, has been updated accordingly to reflect the revised earth disturbance earthwork assumptions, including any anticipated import of fill material as applicable.

All associated grading plans and supporting documentation have been updated to ensure consistency between the cut/fill analysis, plan sheets, and permit application. (See the E & S Plan Grading Volumes spreadsheet included in E & S Module 1).

89. 102.8(f)(8), §102.8(g)(2): The Infiltration Area (SF) values provided within Item 9 of the Stormwater Analysis – Runoff Volume section of Module 2 for UNT 2 to the Ohio River appear to be incorrect, based on review of the PCSM drawings and the NPDES spreadsheets. Please revise to read consistently.

CEC Response:

The overall stormwater management design approach has been modified, and all related computations and worksheets have been updated accordingly.



90. §102.8(f)(8), §102.8(g)(2): The volume and water quality requirements calculated through the provided PADEP PCSM Spreadsheets do not appear to have been met. Page 9 of the PCSM report suggests that water quality requirements will be met at POI-1 through the reductions of runoff and volume requirements of the POI-2 through POI-6 areas. This is not correct, nor valid. Water quality and volume requirements must be met for POI- 1, independent of POI-2 through POI-6. Meeting the volume and water quality requirements derived from the spreadsheet for Chapter 102 applications is encouraged, and in this case may be required, because the reviewing agency will receive calculations in a consistent format, which is intended to provide for more efficient and timely reviews.

CEC Response:

The overall stormwater management design approach has been modified, and all related computations and worksheets have been updated accordingly.

91. §102.8(f)(8), §102.8(g)(2): It appears the volume Calculations within Appendix E provide an alternative design standard to the PADEP PCSM Spreadsheet. If an alternative design is intended, Item 3. Stormwater Analysis (Runoff Volume) section of Module 2 for the unnamed tributary 2 to the Ohio River should be checked. Please revise.

CEC Response:

The Volume Calculations provided in the updated post-construction stormwater management plan utilize the standard PADEP PCSM Spreadsheet.

MRC Comments §102.8(f)(15)

92. The applicant's MRC design deviates from the design standard 2-yr ponding depth, maximum ponding depth, MRC Release Rate, and ponding time, stating the project is adhering to the "new standard". The mix of the two design standards is not appropriate. The applicant must adhere to the MRC standard which was in place when the application was first made, or switch to the current MRC design standard (preferred). Please revise.

CEC Response:

The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance.

93. Provide 1.2-inch routing calculations in support of 27,588 MRC Volume listed within the Managed Release Concept (MRC) Design Summary sheet. Please provide.



CEC Response:

Routing calculations for the eight (8) managed release concept (MRC) cells, including the 1.2"/24-hour storm, are included in the post-construction stormwater management calculations. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance.

94. The maximum MRC BMP Release Rate (cfs) of 0.01 cfs/acre of equivalent contributing impervious is being exceeded with the current design. Please revise.

CEC Response:

The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance. The maximum MRC BMP Release Rate (cfs) of 0.01 cfs/acre of equivalent contributing impervious area comment has been addressed via the modified design.

95. Provide calculations in support of 65,013 cf runoff volume listed within the Managed Release Concept (MRC) Design Summary sheet. Hydrograph #13 lists a 2-yr runoff volume of 43,953 cf for this MRC basin. Please explain the discrepancy and revise as needed.

CEC Response:

The overall stormwater management design approach has been modified, and all related computations have been updated accordingly. As such, the discrepancy noted in this comment is no longer valid.

96. The drawdown time is being exceeded by the proposed MRC design. The maximum drawdown time to the MRC BMP surface should not exceed 72 hours for each 2-100-year/24-hour design storm. Please revise.

CEC Response:

The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities



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have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance. The drawdown time comment has been addressed via the modified design.

97. The ponding depth is being exceeded by the proposed MRC design. The maximum ponding depth (preferably one foot with a maximum of two feet at the peak of the 2-year/24-hour storm event) should not be exceeded for the design of surface BMPs. In accordance with MRC Design Standard 4, the MRC could incorporate a multi-stage detention facility with the upper portions of the facility providing flow attenuation for storm events greater than a 2-year/24-hour storm, to meet 25 Pa. Code § 102.8(g)(3). An engineered overflow structure or reinforced spillway / berm should be installed to provide safe conveyance for storm events greater than a 2-year/24-hour storm. Ponding depth for storms larger than the 2-year/24-hour storm should not exceed four feet. Please revise.

CEC Response:

The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance. The ponding depth comment has been addressed via the modified design.

98. The underdrain calculations provided with the MRC design appear to provide for two (2) underdrains. Please explain and or revise as necessary.

CEC Response:

The modified stormwater management plan no longer includes underdrains beneath the Manage Release Concept (MRC) cells or within the two (2) stormwater management detention facilities (SWMF-1 and SWMF-2).

99. Provide a demonstration that all available infiltration, evapotranspiration, and WQ BMPs were utilized prior to managing the remaining credit with MRC BMPs. Please note that this is not an all or nothing situation. All credit which can be taken must be taken prior to authorizing the remainder of the required credit using MRC. BMPs in Chapters 5 and 8 of the SWM Manual should be explored. Also, ET credit should be explored via BMPs such as, but not limited to, vegetated swales as conveyance features, small, dispersed rain gardens, tree planting, etc. Evaluate the potential to use green infrastructure including green roofs, water reuse, etc.

Infiltration testing was not completed. The site is 69.8 acres. Per MRC guidance, 1 test should be conducted for every 40,000 sf. Provide a demonstration that this criterion has been considered. It is



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suggested that the Pre- Development Site Characterization Spreadsheet may be used. Alternative site layouts should be considered as well dependent upon results of infiltration testing across the site.

All options should be considered prior to utilizing MRC for SWM. Riparian Buffers should be considered for use as PCSM SCM's under 102.14 due to the Chapter 93 HQ designation of the watershed. There are locations on the project site which could utilize buffers to manage stormwater. Alternative site layouts should be considered which could maximize the use of buffers. It is suggested that Riparian Buffer guidance document 394-5600-001 and Draft PCSM Manual be consulted regarding the cost benefit along with the PCSM benefits associated with the use of buffers for SWM. The Draft PCSM Manual also has guidance on how to properly use buffers for PCSM credit.

CEC Response:

A narrative and Site Characterization Map have been developed and included as part of the modified stormwater management design explaining the overall stormwater design approach and demonstrating that all available infiltration, evapotranspiration, and WQ BMPs were utilized throughout the site.

Infiltration is not a feasible option throughout much of the site due to existing subgrade conditions, including the presence of Pittsburgh redbeds. A delineation of the Pittsburgh redbeds is included on the Site Characterization Map. In addition, a narrative written by the Geotechnical Engineer of Record describing why infiltration into these existing soils is not desirable is included in the resubmission documents. Infiltration is also not feasible on a large portion of the due to steep slopes and the presence of designated streams and wetlands. Infiltration testing was performed in the vicinity of stormwater detention facility SWMF-2 but did not pass due to the presence of seasonal high ground water.

Bio-retention areas are included in the site plan and in the post-construction stormwater management plan, in an effort to maximize the use of evapotranspiration credit (ET) SCMs across the site, based on the most current version of the PADEP spreadsheet.

Modifications to the layout of the two (2) detention facilities shown in the original stormwater management design were made to reduce impacts to the riparian buffers on site. One of the above ground facilities was moved to an underground system and the other was relocated out of the riparian buffer. In addition, impacts to the riparian buffer will be mitigated by re-establishing plantings on site and providing off-site one to one replacement plantings. The landscape plan also includes reforestation areas to replace trees removed due to the development of the site. Module 4, including an equivalency demonstration, has been provided in the resubmission package.

It is estimated that there are approximately 7.5 acres of tree cover within the riparian buffer, the majority of which will remain undisturbed because tree clearing is prohibited unless necessary for construction activities. The majority of the disturbed area will be restored to vegetative cover in accordance with the project E&S plan. Trees and shrubs will be replanted where feasible as shown on the project landscape plan, such that an estimated 4.6 acres post-construction tree cover within the riparian buffer will be maintained or restored. However, these forested areas are fragmented throughout the buffer, crossed



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by existing utility easements, less than 150-feet-wide, and located on steep slopes with limited infiltration capacity. Therefore the opportunity to utilize them as BMPs/SCMs according to explicit buffer design and width requirements of the Pennsylvania Stormwater Best Management Practices Manual is limited.

Vegetated channels are being incorporated into the design to convey stormwater runoff from upslope development areas to the downslope detention facilities. Landscaping is being proposed throughout the site to shade the parking lot and other impervious areas to assist in cooling stormwater runoff prior to entering the proposed SCMs.

100. The MRC basin receives flow greater than 2-yr event. The design guidance for MRC states that flows from storm events greater than the 2-yr, 24-hr event must be bypassed (routed around and not through) the MRC BMP to a detention facility. This aspect of the design is crucial to the full functioning and thus the full WQ credit achieved by the MRC BMP. Though the guidance does allow that, in certain situations, the flows may not be split, splitting the flows should first be attempted. If it is not possible to split the flow, a narrative should be provided detailing why this cannot be achieved. Insufficient space alone is not always valid justification nor is economic burden. As the detention component in a split flow set up may be quite small in comparison to the MRC component, space requirements are often similar. In any case, not splitting the flow will be detrimental to the function of the MRC and WQ may not be fully met through the design and maintenance. The narrative should provide evidence that these aspects of the design have been considered despite not splitting the flows. Please provide.

CEC Response:

The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance.

Previous ACCD Comments:

101.(22.) §102.8(f)(8), §102.8(g)(3): Explain where overflow from storm events larger than the 2 year/24 hr storm event for the bioretention areas will go. If this is routed to another PCSM SCM, the module, spreadsheet and routing calculations should reflect as such.

SEI RESPONSE: Bioretention area overflows resulting from storm events larger than the 2-year 24-hour storm are conveyed to either SWMF-1 or SWMF-2.

ACCD: Explain why the bioretention areas are not represented in the hydrographs, drainage area maps, etc. Provide any supporting calculations related to the bioretention SCMs.



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SEI RESPONSE: The bioretention ponds are designed to provide volume control and water quality (initial flush) for storm events up to the 2-year 24-hour storm. Larger magnitude storms would pass through the bioretention areas with lesser benefits. Calculations for the bioretention areas is provided in Appendix E of the PCSM Plan. The ponds would provide little or no influence on events larger than the 2-year storm and therefore are neglected in the designs for SWMF-1 and SWMF-2.

ACCD: All PCSM calcs should have routing provided; just the volume calcs are not sufficient.

CEC Response:

Updated routing calculations for the two (2) detention facilities (SWMF-1 and SWMF-2), eight (8) managed release concept (MRC) cells, and bio-retention areas for the 2-, 10-, 25-, 50-, and 100-year storm events are included in the post-construction stormwater management plan.

102. (23.) §102.8(g)(2), §102.8(g)(3), §102.8(f)(8): Provide routing calculations for the MRC Basin for the 1.2"/24 hour storm.

SEI RESPONSE: The 1-inch/2-hour storm is used to determine the allowable release rate through the MRC orifice. Routing of the 1.2"-2hr storm is not required for the MRC analyses. Per MRC guidance, "The stormwater release rate from the MRC SCM for the 1.2-inch/2-hour storm may not exceed 0.02 cubic feet per second (cfs) from the equivalent impervious area within the MRC SCM's drainage area (within the project site)". The calculations for determining the equivalent impervious area and for sizing the SWMF-1 MRC orifice to meet the MRC release rate are provided in Appendix G of the PCSM Plan. The elevation for the stormwater management dewatering orifice has been set no lower than the elevation corresponding to the MRC volume.

Routing analyses for the 1-year, 2-year, 10-year, 50-year, and 100-year 24-hour storms under pre-development and post-development conditions are also provided in Appendix G of the PCSM Plan to complete the MRC evaluation.

ACCD: Per MRC guidance - MRC Design Summary #3, routing is required for the 1.2"/2hr storm for the MRC.

CEC Response:

Routing calculations for the eight (8) managed release concept (MRC) cells, including the 1.2"/24-hour storm, are included in the post-construction stormwater management calculations. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance.

103. (24.) §102.4(b)(5)(v), §102.8(f)(5), §102.14, §102.8(f)(14): The watercourse/wetland report provided does not appear to have considered the possibility of additional watercourses on the southern side of



the site or the northwestern side of the site. Please revisit and confirm there are not any other surface waters in those areas of the site that would require buffer protection with easements or implementation. Make any necessary changes to the application package. Module 4 may also be needed if there are smaller water courses present on those areas of the property.

SEI RESPONSE: Streamline accompanied personnel from the PADEP and the USACE March 21, 2025, to revisit these areas. No streams are located within the existing 150-foot buffer on the north side of the site draining to Little Sewickley Creek. All existing channels in the southwest area of the site were determined to be ravines with the exception of a 100-foot section of an ephemeral UNT-6. At the request of the USACE, the ephemeral channels have been added to the wetland report.

ACCD: The drawings show no changes to the area in question. This area should be further evaluated; while there is no earth disturbance there, riparian buffer impacts may be affected. Confirmed based on the Aug 14 revised wetland delineation given to ACCD by PADEP. There are no updated photos in this area.

Response:

Per discussions at the Department/ACCD 1/20/2026 meeting we have added the JD letter from the USACE to this re-submittal. Per discussions at the Department/ACCD 2/17/2026 meeting and the follow-up determination by the Department dated 2/20/2026, the 100'/150' Riparian Buffer requirements for HQ stream designation have been shown on the plans and compliance information has been provided in this re-submittal. (See new design drawings and calculations in Riparian Module 4).

- 104.(25.) §102.8(f)(9): Provide a planting plan for proposed SCMs where ET credits are being taken. Per the PCSM Spreadsheet instructions, a combination of woody and herbaceous plantings should be provided (plugs, not just a seed mixture).

SEI RESPONSE: Planting plans for the bioretention ponds are provided on the Plant Schedule drawing by LBA Landscape Architecture in Appendix G of the PCSM Plan. The plantings will include woody and herbaceous plantings, including plugs.

ACCD: The planting plan provided is for the overall site, not specific to the PCSM facilities. Provide specific plantings for each PCSM SCM. Additionally, this should be included in the PCSM drawing set as the plantings should be recorded with the O&M for the site SCMs.

CEC Response:

A planting plan for each individual bio-retention area has been included in the post-construction stormwater management plan set.

- 105.(29.) §102.8(g)(1): Provide a copy of the infiltration testing results and test pit descriptions for the project.



SEI RESPONSE: Prior to developing a site plan for the proposed high school project, due diligence evaluation (DDE) was conducted on the site. As part of the DDE, a preliminary geotechnical exploration and evaluations was performed that consisted of drilling of 136 test borings across the entire project site. These test borings revealed the project site ridgetop is capped by a layer of competent sandstone with a thin layer of residual sandy soil that has weathered from its parent sandstone. The sandstone layer is approximately 11 feet thick. This sandstone layer is underlain by an unnamed redbed unit, the Ames limestone, and the Pittsburgh redbed unit. The redbed unit is approximately 80 feet thick. The bedrock below the redbed unit consisted of cyclic sequences of sandstone, siltstone, claystone, and shale to the lowest termination elevations across the site. Pockets of colluvium were encountered in many of the test borings, generally located at or below the elevation of the redbed unit. Since the geology of the site consisted of a sandstone rock layer just below the ridge surface and a redbed unit layer below the rock layer, we did not perform pre-development infiltration testing on the site.

ACCD: Some of the boring logs show materials identified as residuum or colluvium that have depths that would allow for infiltration capabilities on the site. This should be thoroughly evaluated on the site, and infiltration should be maximized where possible.

CEC Response:

Infiltration testing was performed in the vicinity of the proposed stormwater detention facility (SWMF-2) on April 16, 2026, and those results are provided in the resubmission documents. Acceptable infiltration rates were not achieved in these test locations due to a limiting layer being encountered with the presence of a seasonal high-water table. (See new design drawings and calculations in NPDES Module 2).

106.(30.) §102.8(g)(1): Provide a drawing showing areas that were investigated for pre-development infiltration capabilities.

SEI RESPONSE: As mentioned in response to comment #29, we did not perform pre-development infiltration testing on the site. However, 136 test borings were drilled across the entire project site. These test borings revealed the soil (sandstone rock, redbed unit, colluvium, etc.) are not conducive to infiltration. Therefore, the site was designed to include bio-retention areas around the proposed school building and parking lots that will be constructed on placed fill material consisting of a mixture of the excavated site soils with sand from the processing (on-site crusher and screens) of the sandstone rock on the site. We are proposing infiltration testing after the proposed bio-retention areas have been constructed. The site Pre-Characterization Map is provided in Module 2. The Map indicates that only the ridge and the area along UNT-2 are potential areas for infiltration. The ridge provides the only size area possible for the school campus.

ACCD: There is opportunity for infiltration around the upper portions of the site, along the ridge parking areas. Infiltration should be maximized to the extent possible in scenarios where MRC is proposed.



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Provide testing in areas that might be able to be utilized and utilize them if you can. The proposed excavations will remove much of the colluvial soil within the areas along the ridge tops, and near the proposed bioretention basins. The soil borings within and around these areas show 7-12 ft of overburden which should be deep enough for some level of suitable infiltration material. It does not appear that this was considered as an option. Please provide.

Response:

Per discussions at the Department/ACCD 1/20/2026 meeting, the geotechnical engineer for the project (Doug Beitko, PE) has provided the following information supporting his determination that infiltration on ridgetops or on downslope colluvial deposits is inappropriate. The site is comprised of a generally east-west running ridge with ground surface elevations that range from approximately 1080 to 1115 FT-MSL. The upper portion of the ridge is composed of massive sandstone with a thickness that ranges from approximately 35 to 81 feet and bottoms out between approximate elevations 1043 and 1022 FT-MSL. The sandstone unit overlies the unnamed redbed unit above the Ames Limestone, which was about 17 to 25 feet thick at our test boring locations. The Ames Limestone was encountered near elevation 1019 FT-MSL at the west end of the ridge, and near elevation 997 FT-MSL at the eastern portion of the ridge. The Pittsburgh Redbeds were encountered at the bottom of the Ames Limestone between elevations 955 and 938 FT-MSL at our test boring locations. Thus, the notoriously landslide-prone units consisting of the unnamed redbeds, the Ames Limestone, and the Pittsburgh Redbeds extend from approximate elevation 1043 to 938 FT-MSL along the length of the ridge. The Pittsburgh Redbeds, [PS3.1] and the unnamed redbeds have very low shear strength due to base material (clay) composition, slickensides within the geologic unit itself, and the propensity to absorb additional water content when exposed to groundwater or water from any source. They also weaken substantially upon exposure to weathering and surface water. These units are responsible for many of the major landslide activities in southwestern PA. The landslide risk of the redbeds increases with loading at the top (buildings, fill embankments, retaining walls, water etc.) and/or reduced support at the slope toe. The risk of landsliding can also be increased by exposure of sensitive soil or bedrock units to weathering and water infiltration into the soil and rock pore space. On this site, substantial deposits of redbed-derived colluvium have migrated downslope from their original position and have covered more competent underlying soils and bedrock.

The landside risks at this site are being managed by cutting (removing) a substantial amount of the sandstone cap, in order to reduce the effect of new building loads upon the sandstone and the supporting redbed-type geologic units. They are also being managed by covering the intact redbeds in timely manner during earthwork construction and limiting water flow to/into the intact redbed units and to/into the redbed-derived colluvium that has been deposited downslope due to prehistoric landslides. Redbed-derived colluvium, by nature, is only borderline stable, with a factor of safety (FS) of unity or 1. The stormwater gathered along the ridgetop must be captured and redirected downslope, below the intact redbed units, and below redbed-derived colluvial deposits that are considered borderline stable in their current condition. As such, any increase in weight due to increased water content, or any decrease in shear strength due to water infiltration has the potential to drop the factor of safety for global slope stability below 1.0 and precipitate additional landslide activity. Therefore, in



our professional geotechnical opinion we have recommended that no stormwater infiltration be designed along the ridgetop or colluvial deposits located downslope on this site.

New ACCD Comments:

107. §102.4(c): The PNDI indicates that less than 40 acres of tree cutting or forest clearing will need to occur to implement the project. Based on the aerial view of the site and the pre/post land covers shown in the application, this is incorrect. The PNDI should be rerun with accurate responses to the questions. (“OH River” Sub area identifies 2.83+36.27 ac of woods = 39.1; “LSC” Sub area identifies 4.34+0.98 ac of woods = 5.32; 39.1+5.32 = 44.42 ac woods within the LOD.)

Response:

In accordance with discussions at the Department/ACCD meeting held on 1/20/2026, a large area of woods will remain within the limits of disturbance (LOD), resulting in total impacts to wooded areas within the LOD of less than 40 acres. A plan has been added showing the locations of all wooded areas within the LOD. A table has also been included on the plan verifying that the total area of impacted woods is less than 40 acres. The PNDI submitted on April 5, 2025, remains valid.

108. §102.6(a)(1), §102.4(b)(5)(i): Provide a properly completed and accurate E&S Module 1. Address the following items:

- a) Page 1, #1 – the response provided does not discuss existing topographic features of the site/surrounding area.
- b) Page 2, #4 – The response provided discusses pre vs. post runoff conditions, but does not discuss during-construction runoff conditions. Describe volume/rate of runoff for the during construction conditions, and identify how runoff will be managed.
- c) Page 5, #18 – there are geologic conditions/soil formations present on the site. A response of NA is not sufficient. Revise to discuss how these conditions will be handled to avoid or minimize potential pollution.
- d) Page 6 – Provide the updated expiration date for the PE license for the E&S plan developer.

Response:

The E&S Module 1 items a–d have been revised to include the requested information. (See new design drawings and calculations in E & S Module 1).

109. §102.4(b)(5)(ii), §102.4(b)(5)(ix): The soil limitations/resolutions in Module 1 discuss blending site soils with sand. Identify where this will take place on the site and provide specific instructions and guidance for the contractor in the E&S plans and sequence. Is this the same material to be used in slope construction as “sand” that is referenced in the geotechnical cross sections? Clarify how and where which material is being utilized.



Response:

The blending of site soils with sand is proposed as backfill material for fill placement for lower /upper entrance driveways, sediment basin/SWMP-2 slopes, MSE Walls and RSS slope construction. GBBE had site soil samples laboratory analyzed for sand fraction testing, red-bed derived clay fraction testing and composite sample testing to determine the percent ratio of sand and clay to be used as backfill material. GBBE prepared Geotechnical Construction Plans, technical specifications and slope stability analysis documents for the proposed project fill placement slopes and are a part of the submittal package. GBBE has identified the location on the cross-sections where the clay/sand mixed soil is to be used. (See submittal Section 8 – Geotechnical Evaluation and Section 8-J Supplemental Soil “Mix Design” Testing Program Narrative and Summary).

110. §102.4(b)(5)(i): The existing conditions drawings have provided a main plan showing the whole site (C100), and then four sheets at a 60’ scale (C100A, C100B, C100C and C100D); however, the Stage 1/Stage 2 E&S plans are only two sheets, also at 60’ scale (ESC101A, ESC101B, ESC102A, ESC102B. Stage 3 has 4 sheets at 60’ scale. Provide the same sheets and overall page for each stage of construction.

a) Identify on the overall view sheets what areas each sheet shows and where the match lines are.

Response:

The plan sheets have been revised in accordance with discussions from the Department/ACCD meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

111. §102.4(b)(5)(i): Existing and proposed contour lines are too similar, while the existing contour lines are dashed, the proposed contour lines are too faint to easily decipher. Please revise for legibility.

Response:

The plan sheets have been revised in accordance with discussions from the Department/ACCD meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

112. §102.4(b)(5)(iii): Show all proposed contours and grading, including those associated with stream restoration impacts, proposed channels, etc.

Response:

The plan sheets have been revised in accordance with discussions from the Department/ACCD meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

113. §102.4(b)(5)(iii): Show all proposed E&S controls on the phased drawings. Some have identifiers pointing to items that are not shown on the drawings. (Example – riprap aprons labeled on sheet ESC103C)



Response:

The plan sheets have been revised in accordance with discussions from the Department/ACCD meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

114. §102.4(b)(5)(iii): Provide larger scaled drawings with match lines for the proposed grading plan. 1" to 100" is too small to see clearly.

Response:

For each of the Stage E & S Plan we have provided a 1"=150' scale plan which shows the overall project site with sheet outlines for 1"=60' plans. We also provide 1"=60' plans with match lines for each of the stages. (See new design drawings and calculations in E & S Module 1).

115. §102.4(b)(5)(i): Show existing buildings adjacent to the site on the drawings.

Response:

Existing buildings adjacent to the site are shown on the drawings and are depicted in a bolder color for improved visibility. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

116. §102.4(b)(5)(ix): Provide a scale on each drawing sheet.

Response:

A scale is included on each drawing; however, its location may vary between sheets to avoid obscuring important features within the viewport. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

117. §102.4(b)(5)(i): The existing conditions plans provided in the E&S set differ from the existing condition plans provided in the JPA set (C100-C100D vs. B102-B103A). Ensure that the existing features on all plan sets are consistent.

Response:

The layer showing existing features in the JPA set was inadvertently turned off. The layers have been corrected, and the existing features are now consistent across the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

118. §102.4(b)(5)(ix): Label and cross reference stream and wetland proposed changes in the E&S plan to items identified in the ARIT.

Response:

We have included a copy of the Chapter 105 Joint permit plans with the submittal.



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119. §102.4(b)(5)(iii): RCE #1 is a stream crossing on UNT #2. This crossing is not shown on the ACCD copy of the JPA drawings or in the ARIT[PS5.1]. Ensure that this activity has appropriate permit coverage. As shown on the drawings, the existing road is much more narrow than the proposed construction entrance; thus it is anticipated that the crossing will need to be modified for construction equipment to access.

Response:

The culvert at the existing stream crossing at RCE #1 will remain and will not be modified. The existing road entrance is gated, with a clear opening width of 34 feet, which is sufficient for construction equipment access. Please refer to the photos below.



Photo 1: Existing gated access road to the site. (1-13-2026)



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Photo 2: Gate at access road to site. (1-13-2026)



Photo 3 and 4: Measurement of clear width at gate. (1-13-2026)

120. §102.4(b)(5)(v): The UNTs to the Ohio River as shown on the plans appear to actually go to Little Sewickley Creek based on Leetsdale MS4 mapping. Provide ABACT E&S controls for the entirety of the site.



Response:

Per discussions at the Department/ACCD meeting on 2/17/2026 and the Department's follow-up determination dated 2/20/2026, we have updated the stream designation and provided ABACT E&S controls for the project site. (See new design drawings and calculations in E & S Module 1).

121. §102.4(b)(5)(xv): Riparian buffer requirements apply to watercourses on the site that are within the Little Sewickley Creek watershed, which is HQ. Revise the plans to show both existing and proposed buffers.

Response:

Per discussions at the Department/ACCD meeting on 2/17/2026 and the Department's follow-up determination dated 2/20/2026, the 100-foot/150-foot riparian buffer requirements for the HQ stream designation have been shown on the plans, and compliance information has been provided with this resubmittal. (See new design drawings and design calculations in E & S Module 1 and RIPARIAN Buffer Module 4).

122. §102.14, 35 P.S. §691.402(c): Provide DEP's Riparian Buffer Module 4 fully completed and signed for the site, as well as any additional riparian buffer worksheets as applicable. Refer to Module 4 instructions, PA Code Ch 102.14, Riparian Buffer guidance (Document # 394-5600-001), and DEP policy on Riparian Buffer Equivalency Demonstrations (Document # 310-2135-002).

CEC Response:

The required DEP Riparian Buffer Module 4 has been completed, signed, and included in the revised submission package. Water quality analysis based on the most recent PCSM Spreadsheet versions providing data outlined in Riparian Buffer and Act 162 implementation guidance associated with the riparian buffer evaluation have also been completed in accordance with the Module 4 instructions, 25 Pa. Code §102.14, Riparian Buffer Guidance Document #394-5600-001, and DEP policy on Riparian Buffer Equivalency Demonstrations (Document #310-2135-002).

The submission includes evaluation of existing riparian buffer conditions within the project area, identification of regulated waters and applicable buffer zones, buffer impact and offsetting plans, and equivalency demonstrations for riparian buffer functions. Supporting figures and plan sheets have been updated to clearly delineate riparian buffer areas and associated PCSM SCMs, where applicable.



These materials have been incorporated into the revised PCSM report and plan set and are provided to demonstrate compliance with riparian buffer requirements under Chapter 102 and Act 162.

123. §102.4(b)(5)(ix): How will the RCE#1 area be accessible by equipment? The edge of the LOD provides minimal space for implementation and maintenance of a stable crossing/constructed entrance between Camp Meeting Rd and the edge of UNT 2 to the Ohio River.

Response:

The stream crossing at RCE #1 is existing and is sufficient to provide access for construction equipment. Therefore, the culvert will remain and will not be modified. (See photographs included in response to comment 119.)

124. §102.4(b)(5)(iii): Identify locations on the drawings for staging/equipment drop-off within the LOD (appropriate for each stage of construction). Ensure that there is sufficient room within the LOD for any necessary clearing, E&S controls, entrances, etc.

Response:

We have shown on the Stage E & S Plans (1 through 7) a large gravel area, in front of the job trailers, located at the northern end and adjacent to Haul Road #1 for large equipment drop-off. (See Stage E & S Plans in E & S Module 1).

125. §102.4(b)(5)(ix): In stage 1, RCEs #1, 2, and 3 are provided as access off of Camp Meeting Rd. The details provided in the E&S plans call for wash racks. Wash racks are not shown on the drawings, and there is inadequate means for water removal in these areas. Revise the plans to show all required features of RCEs with a wash rack, including a collector channel to convey water to each associated CFS trap, location of concrete or welded steel pipe in the entrance, drain space, water supply, etc.

Response:

The existing RCE #1 rumble pad is to remain and alternate BMP's are proposed. RCE #2 and RCE #3 do not include wash racks. The plans and RCE details have been revised accordingly. (See new design drawings and calculations in E & S Module 1).

126. §102.4(b)(5)(ix): Explain how water previously flowing through ephemeral watercourse UNT #6 to the Ohio River will be handled in the post-construction stage. E.g. identify how relief will be provided for the flow. Has it been determined that the flow for this watercourse is purely stormwater, or is it groundwater? Identify any additional features necessary – such as underdrains, keyway drains, etc. as appropriate for this particular location. (Culvert Demo #3/Stream Fill #2)

Response:

UNT #6 is an outfall from an existing on-site storm drainage system and conveys only stormwater. The existing drainage system is not required for the proposed development and will be removed. The area of UNT #6 will be regraded for construction of the lower site driveway, eliminating the stormwater



source. Therefore, no additional features are required to control stormwater flow. (See JD letter from the USACE included with this submittal).

127. §102.4(b)(5)(ix): Explain how water previously flowing through ephemeral watercourses UNT 4 and UNT 5 will be handled in the post-demolition phases. Identify additional features as needed. (Culvert Demo #2/Stream Fill #1)

Response:

UNT #4 and UNT #5 result from stormwater runoff conveyed by an existing outfall and storm drainage system within Camp Meeting Road, and these UNTs solely convey stormwater. The proposed realignment of Camp Meeting Road will remove the existing outfall. The new storm drainage system will collect stormwater runoff from Camp Meeting Road and will convey it to the proposed underground SWMF -1. Therefore, no additional features are required to control stormwater flow. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

128. §102.4(b)(5)(ix): No E&S controls are provided for protection of wetlands along the haul road/access road that runs from UNT #2 to Basin #1. Provide suitable protection for all sensitive features.

Response:

Fence protection measures have been added and shown around wetlands W1, W2 and W3 areas. (See new design drawings in E & S Module 1).

129. §102.4(b)(5)(ix): Provide identifiers/numbering and station numbers for all haul roads, temporary roads, and permanent roads. Identify which detail in the E&S plan is to be followed for haul/temporary roads.

Response:

Identifier numbering and stationing have been added to all new permanent roads on the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

130. §102.4(b)(5)(ix): Per Chapter 3 of the E&S Manual, broad based dips should not be utilized on roads with slopes exceeding 10%. Explain how they will function appropriately on roads in the plans where this design criteria is exceeded.

Response:

Broad-based dips are not proposed for the project. A proposed 5' wide berm will be constructed to support the proposed curb and guide rail located on the northern side (upper gradient) of the proposed upper drive roadway. The proposed storm drainage system along the roadway will have E & S inlet protection to filter the sediment laden runoff. (See new design drawings and calculations in E & S Module 1).



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131. §102.4(b)(5)(ix): Broad based dips should direct flow to either a basin/trap or a well vegetated area with sufficient coverage to resist erosion. This is not being met with the current design, as broad-based dips are discharging to freshly graded slopes and in areas that will not be able to make it to the proposed sediment basins. Revise the plans to provide a suitable outlet and adequate sediment removal for runoff from broad based dips where needed.

Response:

We are not proposing broad-based dips for the project. A proposed 5' wide berm will be constructed to support the proposed curb and guide rail located on the northern side (upper gradient) of the proposed upper drive roadway. The proposed storm drainage system along the roadway will have E & S inlet protection to filter the sediment laden runoff. (See new design drawings and calculations in E & S Module 1).

132. §102.4(b)(5)(ix): Detail #3-4 is provided for a crowned roadway; identify on the plans where crowned roadways are proposed. Ensure appropriate cross drains, roadside ditches, etc. are shown and that calculations are provided for any additional channels/ditches.

Response:

Roadway stationing and cross-sections have been added to the plans to identify the locations of crowned and superelevated roadway sections. All temporary haul roads are crowned. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

133. §102.4(b)(5)(ix): Provide identifiers for all proposed riprap aprons consistent with naming in the details and calculations.

Response:

Identifier numbers have been added to all proposed riprap aprons on the plans, details, and calculations. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

134. §102.4(b)(5)(ix): Provide the detail for riprap aprons in the E&S drawing set; this could only be located in the PCSM set.

Response:

The details for the riprap aprons have been added to the E&S drawing set. (See new design drawings and calculations in E & S Module 1).

135. §102.4(b)(5)(ix): Provide sizing for proposed CFS #20 surrounding the topsoil stockpile. There was no size identified on the plans or in the details.

Response:

The E & S design has changed for the project. We have labeled all the proposed compost filter socks by stage and shown the flow path on the Stage E & S Plans. We also have included spreadsheets that



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calculate the flow path slopes, size of sock and sock slope length capacity for each section. (See new design drawings and calculations in E & S Module 1).

136. §102.4(b)(5)(ix): Identify the maximum dimensions to be utilized for the topsoil stockpile on the plans. Ensure sufficient stockpile space is provided for the amount of topsoil anticipated for the site or provide additional stockpiles where appropriate. Identify in the response the estimated amount of topsoil anticipated to be stockpiled, as well as the amount of topsoil anticipated to be placed upon completion of grading activities.

Response:

A topsoil stockpile has been shown on the Stage E & S Plans with contours, dimensions and maximum height. We have estimated the quantity of topsoil to be removed and stockpiled at the southern end of the site in Edgeworth Borough. The quantity calculation is included on the E & S Grading Volume spreadsheet prepared for each stage. (See new design drawings and calculations in E & S Module 1).

137. §102.4(b)(5)(iii), §102.4(b)(5)(ix), §102.4(b)(5)(iv), §102.4(b)(5)(xii): The agreement between Leetsdale Borough and Quaker Valley School District (QVSD) relating to land development, requires that the plans help to resolve existing stormwater issues and handle off-site flows of stormwater going into Leetsdale. This does not appear to have been included in the design submitted for permitting. Clarify the proposed plan and confirm drainage areas represented in the application materials align with site goals. (Reference: <https://www.leetsdaleboro.net/media/206>, page 3, item #4e.)

CEC Response:

The existing stormwater issues in the vicinity of the proposed Quaker Valley High School project occur primarily at the existing storm culvert located at the intersection of Beaver Street and Camp Meeting Road. The post-construction stormwater management design calculations for the high school project designated this culvert as Point of Interest #1 (POI-1) and analyzed this location to show a reduction in the post-development flows versus pre-development flows for the 2-year (pre-84.50 cfs v. post-75.62cfs), 10-year (pre-202.22cfs v. post-175.50cfs), 25-year (pre-252.25cfs v. post-223.76cfs), 50-year (pre-276.89cfs v. post-246.42cfs), and 100-year (pre-335.61cfs v. post-300.33cfs) storm events.

The management of stormwater on the high site is being achieved through the use of two (2) detention facilities, eight (8) managed release concept cells, and multiple bio-retention areas. In addition, a portion of the existing stormwater runoff from the Quaker Heights development is being collected and conveyed to the underground detention facility located on the new high school development site. This provides stormwater management of off-site flows that had not previously been provided.

138. §102.4(b)(5)(vi): Module 1 indicates that there is an existing “rumble pad” to be utilized on the site. Identify the location on the plans, provide a detail for the rumble pads, identify the size, length, etc. of the existing rumble pad, and ensure that it is meeting ABACT requirements. Additionally, provide



evaluation on the current status of the rumble pads to determine if they can be used as-is, or if modifications or maintenance will need to be conducted prior to use.



Photo 5: Existing rumble pad at north gate off of Camp Meeting Road. (1-13-2026)



Photo 6: Measurement of travel length of rumble pad. (1-13-2026)



Photo 7: Measurement of travel length of rumble pad. (1-13-2026)



Photo 8: Measurement of riprap apron downgradient of rumble pad. (1-13-2026)



Response:

The existing rumble pad is in good condition and is located at the north gate off Camp Meeting Road. It is 21.5 feet wide and 6 feet long and discharges to a 17-foot-long riprap apron. We are keeping the rumble pad in place and alternate BMP's are proposed.

139. §102.4(b)(5)(ix): "Broom wheels" are identified as an E&S BMP in Module 1. This is not currently an approved E&S control; where street sweeping is anticipated to be done, this should be conducted with a vacuum truck. Refer to the E&S manual and approved alternative BMPs list. Revise as needed.

Response:

The reference to broom wheels has been removed from Module 1. We have proposed alternative E&S BMP's instead of truck tire washing to meet the ABACT requirement for Chapter 93 HQ designation of the watershed. The proposed alternative E&S BMP's are public street sweeping with a vacuum sweeper; rolling of dirt and gravel roads at the end of each workday (or more frequently as needed); and manual cleaning of tires prior to site egress. (See new design drawings in E & S Module 1).

140. §102.4(b)(5)(vii): The sequence provided does not match the features shown on the drawings for each stage. For example – new sidewalk is shown on the drawings in earlier phases but isn't mentioned as being installed until the final stage. Revisit the sequence and drawings to make sure they are consistent with anticipated project progress in each stage.

Response:

The sequence of construction items for the project has been revised according to construction information shown on each Stage E&S Plan. (See new design drawings and calculations in E & S Module 1).

141. §102.4(b)(5)(vii): More detail should be provided in the sequence regarding specific instructions for BMP installation.

Response:

The sequence of construction has been revised to include more stage-specific BMP installation and instructions. (See new design drawings and calculations in E & S Module 1).

142. §102.4(b)(5)(vii): The construction sequence mentions a few things that are not direct installation of E&S controls but generally is still lacking in terms of the construction activities that will need to take place on the site. Revise the sequence to be specific and more detailed. (For example, Stage 3 includes installation of several E&S BMPs, but there is nothing else identified to happen in stage 3.)

Response:

The sequence of construction has been revised to include additional phase-specific BMP installation and instructions. (See new design drawings and calculations in E & S Module 1).



143. §102.4(b)(5)(vii): Reference following the JPA plans/permit conditions in appropriate steps of the construction sequence.

Response:

The JPA plans and permit conditions have been referenced in the construction sequences and on the stage E & S Plans. (See new design drawings and calculations in E & S Module 1).

144. §102.4(b)(5)(vii): Identify in the sequence that the initial PCSM recording will need to be completed and provided to ACCD prior to scheduling the pre-construction meeting.

Response:

A note regarding PCSM recording has been added to the construction sequence on the E & S Plans and the PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

145. §102.4(b)(5)(vii): Phase 1: Identify marking of environmentally sensitive features and installation of protective fencing or similar prior to earth disturbance activities in the construction sequence.

Response:

Protective fencing has been added around tree and wetland areas within the LOD, and installation of the fencing has been included in the initial construction stage to ensure these areas are protected from disturbance. (See new design drawings and calculations in E & S Module 1).

146. §102.4(b)(5)(vii): Phase 1: Insufficient E&S controls are provided in the sequence prior to demolition of existing structures. Demolition typically results in earth disturbance. Revise the sequence to implement appropriate controls prior to this step for each structure. Revise worksheet #1 to include additional sections of CFS.

Response:

Compost filter socks have been added along the downgradient slopes of the demolition areas for the three houses to be razed, and these compost filter socks have been included on Worksheet #1. (See new design drawings and calculations in E & S Module 1).

147. §102.4(b)(5)(vii): Phase 1: Clarify if all existing building demolition will occur concurrently, or if these will be done in a certain order.

Response:

Two of the houses and the concrete foundation located in Edgeworth Borough will be razed initially. The third house, located near the existing construction entrance, will be used as a construction office and will be razed in the final stage of the project. This has been noted in the construction sequence. (See new design drawings and calculations in E & S Module 1).



148. §102.4(b)(5)(vii): Phase 1: The plans show locations of the new roadway and broad based dips; these are not discussed in the sequence, please revise.

Response:

We are not proposing broad-based dips for the project. A proposed 5' wide berm will be constructed to support the proposed curb and guide rail located on the northern side (upper gradient) of the proposed upper drive roadway. The proposed storm drainage system along the roadway will have E & S inlet protection to filter the sediment laden runoff. The roadway work has been added to the construction sequence. (See new design drawings and calculations in E & S Module 1).

149. §102.4(b)(5)(ix): Phase 1: Construction vehicle access has not been provided for locations of building demolition. Identify which entrance is to be used or provide additional entrances if need that will prevent sediment from leaving the site during demolition activities.

Response:

The upper existing construction entrance to the site will be used for access during demolition of the two houses and the concrete foundation. The third remaining house, used as a site office, will be demolished in the final stage.

150. §102.4(b)(5)(ix): Phase 1: Identify locations for construction dumpsters or other stockpile/staging areas associated with building demolition.

Response:

Demolition dumpster locations have been added to the plans, and topsoil stockpile locations are shown on each of the Stage E & S Plans.

151. §102.4(b)(5)(ix): Phase 1: Identify the location of a site trailer or equivalent on the drawings if one will be utilized during Phase 1.

Response:

The upper house will be used for a temporary construction office, and site trailers will be located in the proposed gravel area south of the upper house. A proposed gravel area located north of the upper house is designated for worker vehicle parking. (See Initial Stage E & S Plan in E & S Module 1).

152. §102.4(b)(5)(ix): Phase 1: Additional perimeter CFS is needed below Basin 2 grading in this area:

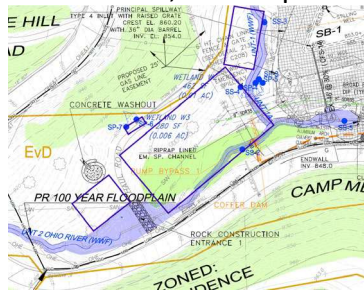




Response:

With the change of the watershed to HQ designation the previous two sediment basins have been replaced with proposed sediment basin SB-1 which is located further away from UNT-2. Due to the existing channelized topography below SB-1, existing UNT-6, a rock filter will be installed in UNT-6 to filter runoff from the construction of SB-1, outlet pipes and rip-rap apron. (See new design drawings and calculations in E & S Module 1).

153. §102.4(b)(5)(ix): Phase 1: Additional CFS is needed between the haul road from RCE #1 to SB-1, including below the proposed concrete washout in this area. No protection is provided for wetland W3 or for UNT 2, and no protection is provided for UNT 1 or 1A or wetland W2.



Response:

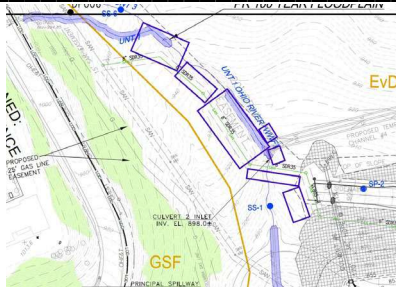
Compost filter sock (CFS) has been added below the haul road from RCE #1 to SB-1 and around the proposed concrete washout in this area on the plans. Protection fencing has also been added around wetlands W1, W2 and W3. (See new design drawings and calculations in E & S Module 1).

154. §102.4(b)(5)(ix): Phase 1: Provide E&S controls for utility work associated with the gas and sanitary lines. Several areas are not in an area that would flow to an already proposed section of CFS.

Response:

The submitted design will not require the relocation of the existing sanitary line. The gas company is relocating the gas line into the south bound lane of Camp Meeting Road and will abandon the gas line which crosses through the project site, however, they are leaving the abandoned line in place. During the construction of the lower driveway and installation of Culvert #3 the portion of the gas line along UNT-2 will be removed by the QVSD contractor. Pump bypass is proposed for this work in and along UNT-2. (See new design drawings and calculations in E & S Module 1).

155. §102.4(b)(5)(ix): Phase 1: Additional CFS is needed between areas of earth disturbance and UNT 1 in the area below proposed temp diversion channel #4 and between proposed sanitary.



Response:

The submitted design will not require the relocation of the existing sanitary line. (See new design drawings and calculations in E & S Module 1).

156. §102.4(b)(5)(ix): Additional CFS is needed between Basin 1 grading earth disturbance activities and UNT1 and 1A and Wetland W2.



Response:

The design for the site has changed, and previously proposed sediment basin SB-1 and SB-2 have been removed. The new sediment basin SB-1 is located outside the riparian buffer. (See new design drawings and calculations in E & S Module 1).

157. §102.4(b)(5)(ix): Additional CFS is needed between sanitary line earth disturbance and

Response:

The submitted design will not require the relocation of the existing sanitary line. (See new design drawings and calculations in E & S Module 1).

158. §102.4(b)(5)(ix): Provide a detail or diagram in the E&S set showing how erosion control for utilities/trenching activity should appear. (e.g. spoils on the upslope side of the trench, perimeter controls, etc.)



Response:

E&S details have been added to the E & S Plan Detail sheet showing how erosion control to be provided for utility and trenching activities. (See new design drawings and calculations in E & S Module 1).

159. §102.4(b)(5)(ix): Phase 2: Additional CFS is needed between earth disturbance and various watercourses; many of these are the same locations as in Phase 1. Re-evaluate areas of disturbance, slopes, etc. and provide additional CFS; update the calculations with any new sections.
- a) Was it assumed that Phase 1 areas will be greater than 70% permanently stabilized by the time Phase 2 is under construction? Perimeter controls are shown to be removed in many locations; revise to show that these will remain until stabilization requirements are met.

Response:

With the change of the watershed to HQ designation the E & S design for the project has changed. We have included in the submittal revised Stage E & S Plans which now show eleven construction stages. The construction sequence and Stage E&S Plans have been revised to indicate what perimeter controls will be maintained and which perimeter controls will not be removed after 70% of the relevant area has been permanently stabilized. (See new design drawings and calculations in E & S Module 1).

160. §102.4(b)(5)(ix): Phase 2: Insufficient space is provided between CFS and the edge of grading. Ensure that enough space is provided to allow for storage space for sediment as well as access for maintenance. Recommendation is approximately 10 ft.

Response:

We have revised all the proposed compost filter sock (CFS) location at the edge of proposed grading to have a 10-foot maintenance area along the CFS. (See new design drawings and calculations in E & S Module 1).

161. §102.4(b)(5)(ix): Phase 2: CFS #19 is shown almost IN the watercourse near Beaver Street. Please revise. Sufficient buffer space should be provided between perimeter controls and environmental resources.

Response:

The proposed future work from SWMF-2 to Beaver Street, located in Leetsdale Borough, is not part of this project or application, and all future work has been removed from the plans. (See new design drawings and calculations in E & S Module 1).

162. §102.4(b)(5)(ix): The slope length above CFS in the calculations does not match the maximum slope lengths for the areas on the plans between pre/post conditions. Recheck calculations and make any changes necessary to account for maximum drainage areas.



Response:

We have included spreadsheets that calculate the flow path slopes, size of sock and sock slope length capacity for each CFS flow section. The CFS flow paths have been shown on the Stage E & S Plans. (See new design drawings and calculations in E & S Module 1).

163. §102.4(b)(5)(vii): Reference specific detail identifiers for E&S controls in the sequence.

Response:

E&S control identifiers have been added to the construction sequence. (See new design drawings and calculations in E & S Module 1).

164. §102.4(b)(5)(ix): Provide specific cut/fill balance information for each stage of construction. For example, when grading is occurring in Phase 1 for sediment basin installation, is that earthwork balanced? Or will there be a need to export/import material to or from a different location on the site?

Response:

The design of the site is to be a balanced cut and fill project with no import or export of fill material. We have included with E & S Module 1 a spreadsheet which shows the cut and fill grading volumes per each E & S Plan Stage. No grading material is proposed for importing or exporting from the site. (See new calculations in E & S Module 1).

165. §102.4(b)(5)(vii): Phase 1: Clarify if the sediment basins will be implemented concurrently as the sequence currently reads. Revise the sequence to be more specific in terms of sediment basin installation, including installation of each major component in the order in which they will be implemented for each basin.

Response:

The sequence of construction for Stage 2 construction of sediment basin SB-1, outlet structure, pipes and rip-rap apron has been updated to include installation of each of the major component in the order in which they will be implemented. (See new design drawings and calculations in E & S Module 1).

166. §102.4(b)(5)(vii): Phase 1: Specify removal of cofferdams, pump bypasses, etc. in the construction sequence.

Response:

The removal of cofferdams, pump bypasses, and related items has been added to the construction sequence. (See new design drawings and calculations in E & S Module 1).

167. §102.4(b)(5)(vii), §102.4(b)(5)(ix): The JPA plans indicate removal of existing utilities along the site; this is not reflected in the E&S plans or sequence. Revise to show all proposed earth disturbance in the E&S plans. Provide additional perimeter controls where needed.



Response:

The submitted design will not require the relocation of the existing sanitary line. The gas company is relocating the gas line into the south bound lane of Camp Meeting Road and will abandon the gas line which crosses through the project site, however, they are leaving the abandoned line in place. During the construction of the lower driveway and installation of Culvert #3 the portion of the gas line along UNT-2 will be removed by the QVSD contractor. Pump bypass is proposed for the work in and along UNT-2. (See new design drawings in E & S Module 1).

168. §102.4(b)(5)(vii): Explain how erosion will be prevented where proposed drainage channel #3 discharges to wetland #1.

Response:

With the change of the watershed to HQ designation the design for the site has changed. We moved the large, proposed fill slopes away from wetland W1. We have designed collection channel C2 to collect any site runoff and direct it away and around wetland W1. Fencing will be installed around wetland W1 to protect it during construction. (See new design drawings and calculations in E & S Module 1).

169. §102.4(b)(5)(vii): There are more stages in the sequence than drawings that were provided. These should match and correspond to each other.

Response:

The construction sequence stages have been coordinated with the eleven Stage E & S Plans. (See new design drawings and calculations in E & S Module 1).

170. §102.4(b)(5)(ix): Stage 4: Identify locations on site where rock will be processed on site.

Response:

We have identified a rock crusher and rock processing area on the Stage E & S Plans. (See new design drawings and calculations in E & S Module 1).

171. §102.4(b)(5)(vii): Stage 5 states “build to final grade.” Build what to final grade? Be more specific.

Response:

We have added more stages to the design and now have eleven. Stage 11 or Final Stage shows all the work to be performed within this stage. The final stage construction sequence has been updated to include the specific areas that will be graded for the final grade. (See new design drawings in E & S Module 1).

172. §102.4(b)(5)(vii): Specify main areas to be permanently stabilized upon moving from one stage of construction to another.



Response:

Permanently stabilized areas have been identified on the various Stage E & S Plans. (See new design drawings and calculations in E & S Module 1).

173. §102.4(b)(5)(ix): Clarify the purpose of Rock Filter #1 and Culvert #4. Explain how the rock filter will be constructed overtop of the riprap apron.
- Note, sending concentrated sediment laden water to a rock filter is not recommended. Provide documentation that the proposed rock filter can handle the flow [PS5.1].
 - The description for culvert 4 in the E&S calculations discusses culvert 3; revise to match the appropriate culvert. Confirm naming on the plans matches naming in the calculations.

Response:

With the new design Rock Filter #1 and Channel #4 have been removed from the project. (See new design drawings and calculations in E & S Module 1).

174. §102.4(b)(5)(ix): Clarify the purpose of having both the riprap channel identified and the emergency spillway identified in the same location for Sediment Basin 2. Are these two separate improvements?

Response:

The new design removed Culvert #4 from the project. (See new design drawings and calculations in E & S Module 1).

175. §102.4(b)(5)(ix): The grading sheets show a significant difference in grading in the area of Culvert 3 inlet. (Channel vs. a basin like feature) Provide explanation and ensure all proposed grading matches in the plans.

Response:

With the new design the grading has changed for the new sediment basin SB-1, collection channel C1 and the new collection channel storm pipe. (See new design drawings and calculations in E & S Module 1).

176. §102.4(b)(5)(ix): Provide naming/identifiers for the proposed stilling wells at basin inlets. Provide details and sizing information in the E&S detail sheets. Provide maintenance instructions. Will these be utilized during construction as scour protection?

Response:

Stilling wells are not proposed on this project now. (See new design drawings and calculations in E & S Module 1).

177. §102.4(b)(5)(ix): Provide identifiers for proposed endwalls in the E&S drawings.



Response:

Identifiers have been added to the plans for each of the endwalls on the Stage E & S plans and PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

178. §102.4(b)(5)(ix): Provide identifiers for proposed catch basins on the E&S drawings.

Response:

Identifiers have been added to the plans for each of the catch basins on the E & S plans and PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

179. §102.4(b)(5)(ix): Inlet protection is provided on catch basins that will discharge into the proposed sediment basins. This is inconsistent with guidance in the E&S manual. Remove inlet protection on those that will be able to be treated by the basins in each phase until the basins get converted.

Response:

The E&S Manual states the following:

“STORM INLET PROTECTION”

Storm sewer inlets should be protected from sediment pollution wherever the sewer system does not discharge into a functioning sediment basin or sediment trap. (NOTE: Since detention ponds are not typically designed to effectively remove sediment prior to discharging, storm sewers discharging to detention ponds should be protected from sediment pollution.) Inlet protection may also be desirable in cases where it would be difficult or expensive to clean accumulated sediment from sewer lines, or where a temporary riser may have to be removed from a permanent basin prior to completion of all earthmoving.”

Based on the above statement, inlet protection is required if it does not discharge to a functioning sediment basin. The E&S Manual does not discourage or prohibit the use of inlet protection for discharges into a functioning sediment basin. These additional BMPs will minimize the risk of clogging the storm pipes. (See new design drawings and calculations in E & S Module 1).

180. §102.4(b)(5)(ix): Compost filter sock is shown crossing contours in multiple locations; this may lead to channelization along the sock and subsequent failure of the sock. Revise to show CFS being placed on existing and level contours.

Response:

The CFS locations on the plans have been revised to follow existing and level contours. (See new design drawings and calculations in E & S Module 1).

181. §102.4(b)(5)(ix): Show the ends of CFS as being upturned 45 degrees on each end of each section of CFS.



Response:

The CFS has been revised on the Stage E & S Plans to be upturned 45 degrees at each end. (See new design drawings and calculations in E & S Module 1).

182. §102.4(b)(5)(vii): For areas that will be completed, identify any proposed removal of E&S BMPs in the sequence. For example, the concrete washout by RCE #1 still remains in the final stage plans. If this is not needed at this stage of construction, it should have been removed to minimize extent/duration of activity near resources. Evaluate and consider these items in the construction sequence; make any changes necessary.

Response:

The construction sequence has been revised to include more stage-specific BMP removal instructions. (See new design drawings and calculations in E & S Module 1).

183. §102.4(b)(5)(ix): For any catch basin that will need to utilize inlet protection, the maximum inlet drainage area is 1/2 acre; this is exceeded for many catch basins, with those exceeding being between 0.53 ac and 2.86 acres. After accounting for those that will drain to a sediment basin, evaluate the remainder that will need inlet protection and make changes necessary to meet guidance in the E&S manual.

Response:

Drainage areas for each proposed catch basin have been evaluated and revised to ensure that each catch basin requiring inlet protection (filter bags) drains less than 0.5 acres. For catch basins with drainage areas larger than 0.5 acres, sump inlet protection is proposed. Inlet protection has been removed for catch basins conveying runoff to the sediment basin. (See new design drawings and calculations in E & S Module 1).

184. §102.4(b)(5)(ix): Phase 2: Inlet protection is shown outside of the LOD. All E&S BMPs must be within both the LOD and NPDES permit boundary.

Response:

The work in this area is no longer part of the project, and inlet protection in this area is no longer required and has been removed. (See new design drawings and calculations in E & S Module 1).

185. §102.4(b)(5)(iii): Clarify what is labeled as proposed gas line by others along Camp Meeting Road. Is that an entirely separate activity, or is the new gas line required for this project?

Response:

The new gas line will be installed in Camp Meeting Road by the gas company and will be relocated prior to the start of this project. The line will serve the remaining residences along Camp Meeting Road as well as the new school. The abandoned portion along and within Stream UNT2 will be removed during



the new school project, and this work has been included in the Joint Permit Application for ease of project administration. The gas line work within Camp Meeting Road is the responsibility of the gas company and is not included as part of the NPDES permit application. (See new design drawings and calculations in E & S Module 1).

186. §102.4(b)(5)(vii): Will all paving actually take place in the final stage of construction as identified in the sequence, or will some sections be paved as certain project milestones are met? Revise the sequence if needed.

Response:

The paving of driveways and parking lots will occur in the final stage. The contractor will install the stone subbase for the driveways and parking areas to prevent subgrade degradation and stabilize those areas. After stabilization, the sediment basin SB-1 will be converted into SWMF-2. (See new design drawings in E & S Module 1).

187. §102.4(b)(5)(vii): Provide specific instructions for conversion of the sediment basins in the E&S sequence.

Response:

The construction sequence has been revised to include instructions for converting the sediment basin SB-1 into a stormwater management facility SWMF-2. (See new design drawings and calculations in E & S Module 1).

188. §102.4(b)(5)(vii): Provide language in the sequence that specifies in-stream work should be conducted during periods of low flow conditions.

Response:

The construction sequence has been revised to specify that in-stream work for the culvert installation, removal of the abandoned gas line and utility crossings shall be conducted during periods of low-flow conditions. (See new design drawings in E & S Module 1).

189. §102.4(b)(5)(vii): Provide language in the sequence and methods in the plans for avoiding/reducing potential compaction in areas with infiltration SCMs.

Response:

No infiltration areas are proposed for this project. MRC design is being utilized for the site. (See new design drawings in E & S Module 1 and NPDES Module 2).

190. §102.4(b)(5)(vii): Specify compaction and lift requirements for sediment basin embankments, major slope areas, etc. in the sequence as those items are graded.



Response:

The construction sequence has been revised to include reference to the project geotechnical specifications for specific compaction and lift criteria for the sediment basin embankments, major slope areas, and similar features. (See new design drawings in E & S Module 1 and Section 8 – Geotechnical Improvements sheet G-1).

191. §102.4(b)(5)(viii): For basins required to be ABACT reductions cannot be taken in the dewatering zone. Revise calculations and design to meet criteria in the E&S manual.

Response:

The dewatering zone reduction has been removed, and the basin calculations have been revised to meet the criteria in the E&S Manual. (See new design drawings and calculations in E & S Module 1).

192. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The E&S Manual and PA Stormwater Manual guidance discourages construction of basins on steep slopes, as well as significant alteration of a slope for the purposes of installing a basin. Explain how the amount of earthmoving, basin placement, and slope alterations are meeting the design considerations in the guidance.

CEC Response:

The placement of the proposed sediment basin and stormwater management detention facility has been reviewed in consideration of the PA Erosion and Sediment Pollution Control Program Manual and the PA Stormwater BMP Manual guidance discouraging basin construction on steep slopes or requiring significant slope alteration.

1. Basin Siting and Topographic Integration

The basins have been located to the maximum extent practicable within existing natural drainage swales and lower-relief areas of the site. The design intentionally avoids steep headwater slopes and ridge areas and instead utilizes natural depressional areas and transition zones where grading is minimized. Basin footprints were adjusted to conform to existing topography to the extent feasible while maintaining required storage and treatment volumes.

2. Earthwork Minimization and Balance

The grading design has been refined to reduce unnecessary cut and fill associated with basin construction. Earthwork has been balanced to the extent practicable, and basin side slopes have been designed consistently with stable grading practices to avoid excessive slope reconfiguration. Where grading transitions are required, they are limited to localized tie-in areas rather than broad-scale slope modification.

3. Slope Stability and Constructability

All basin embankments and cut/fill interfaces have been evaluated for constructability and long-term stability. Slopes have been designed within acceptable geotechnical limits to prevent instability and



minimize disturbance to existing terrain. No basins require installation on inherently unstable or excessively steep natural slopes.

4. Compliance with Design Guidance Intent

While some degree of grading is necessary to achieve required storage, water quality treatment, and conveyance objectives, the design has been developed to remain consistent with the intent of the referenced guidance by:

- *Avoiding placement on steep or erosive slope conditions where practicable.*
- *Minimizing alteration of existing terrain outside basin footprints.*
- *Concentrating earth disturbance within defined, controlled BMP areas.*
- *Preserving surrounding slopes and drainage patterns to the extent feasible.*

5. Conclusion

The basin layout and associated grading have been designed to balance regulatory stormwater and sediment control requirements with the guidance discouraging steep-slope basin construction. The final design represents a minimized and controlled earth disturbance approach, with the basin sited in the most suitable available topographic areas while maintaining functionality and stability.

193. §102.4(b)(5)(viii), §102.4(b)(5)(ix): The PA Stormwater manual states that detention basins should not worsen the runoff potential of the site by removal of trees for the purpose of installing a basin. Additionally, existing trees are an important consideration for reducing potential of slides on landslide prone soils. Explain how this was considered in the design. Describe other areas that were considered for stormwater/sediment basins and why the selected locations were the most ideal.

CEC Response:

The stormwater detention and sediment basin location has been reviewed in consideration of the PA Stormwater BMP Manual guidance discouraging unnecessary removal of existing mature vegetation for basin construction, particularly where such removal could increase runoff potential or reduce slope stability in landslide-prone areas.

1. Consideration of Existing Tree Cover and Slope Stability

Existing tree cover was evaluated during basin siting to minimize disturbance to mature vegetation to the extent practicable. Areas with higher-quality or established tree stands were avoided where it is feasible to preserve root structure that contributes to slope stability and erosion resistance. The basin footprint was refined to reduce impacts to existing wooded areas, particularly on or adjacent to steeper slopes where vegetation plays a key stabilizing role.

2. Alternative Basin Location Evaluation

Multiple alternative basin locations were evaluated during design development, including flatter upland areas and previously disturbed portions of the site. These alternatives were assessed based on:

- *Proximity to contributing drainage areas.*



-
- *Constructability and grading requirements.*
 - *Ability to achieve required storage and treatment volumes.*
 - *Minimization of tree clearing and forested disturbance.*
 - *Avoidance of steep or potentially unstable slopes.*

Several alternative configurations were ultimately not selected due to one or more of the following constraints: inability to capture required drainage efficiently, increased earthwork and grading impacts, interference with planned site infrastructure, or reduced hydraulic performance.

3. Selected Basin Locations – Rationale

The selected basin location represents the most suitable balance of hydraulic function, constructability, and environmental impact minimization. These locations:

- *Utilize lower-elevation or transitional topographic areas where feasible.*
- *Limit encroachment into higher-density tree cover where practicable.*
- *Reduce the need for extensive slope regrading compared to alternatives.*
- *Provide efficient interception of contributing drainage with minimized conveyance infrastructure.*

4. Landslide and Geotechnical Considerations

Where basins are located near sloped areas, grading has been designed to maintain stable slope angles and avoid removal of vegetation critical to slope reinforcement. Basin embankments and cut/fill transitions have been designed in accordance with standard geotechnical practices to avoid destabilizing existing slope conditions.

5. Reduction in Number of Proposed Basins

The stormwater management design has been modified to reduce the number of above-ground detention facilities from two to one. The second stormwater management detention facility is now an underground system beneath the proposed athletic field. This modification will reduce the number of trees impacted during construction, including the existing vegetation located within the 100' and 150' riparian buffers.

6. Conclusion

The basin location process included evaluation of multiple alternative locations with specific consideration of tree preservation, runoff impacts, and slope stability. The final basin location was selected as the most appropriate compromise between regulatory stormwater requirements, constructability, hydraulic efficiency, and minimization of environmental disturbance, including preservation of existing vegetation to the extent practicable.

194. §102.4(b)(5)(ix): The bottom elevation of SB-1 shown on the drawings is 853.0 ft, but the plans identify 855.0 ft. Revise the plans, calculations, and details to be consistent.



Response:

This comment is no longer applicable because the design has changed and former sediment basin SB-1 was removed from the plans. (See new design drawings and calculations in E & S Module 1).

195. §102.4(b)(5)(ix): Identify the location for a cleanout stake in each sediment basin on the E&S plans

Response:

The clean-out stake location for the proposed sediment basin SB-1 has been identified on the plans. (See new design drawings and calculations in E & S Module 1).

196. §102.4(b)(5)(viii): To meet ABACT requirements for sediment basins in special protection watersheds, reductions identified on Standard E&S Worksheet #12 cannot be taken in the dewatering zone. Revise the design to meet all requirements to make the sediment basins ABACT.

Response:

The dewatering zone reduction has been removed, and the basin calculations have been revised to meet the criteria in the E&S Manual. Worksheet #12 has been revised, and the basin design has been updated to meet ABACT requirements. (See new design drawings and calculations in E & S Module 1).

197. §102.4(b)(5)(ix): As the drainage area to each sediment basin is greater than 10 acres, a concrete cradle should be utilized for the outlet barrel. Revise the plans and details to show this. (Standard detail #7-10 in the E&S manual)

Response:

A concrete cradle detail has been added to the E & S Plans and the PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

198. §102.4(b)(5)(ix): Due to the piping nature of on-site soils, consider the use of a filter diaphragm for the outlet barrels in addition to the concrete cradle for both sediment basins.

Response:

The use of a filter diaphragm has been incorporated into the revised outfall design for sediment basin SB-1/SWMF-2, and a detail has been added to the drawings. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

199. §102.4(b)(5)(ix): Provide specifics in the plans regarding sediment basin embankment grading requirements, including compaction and lift specifications.

Response:

The construction sequence has been revised to include reference to the project geotechnical specifications for specific compaction and lift criteria for the sediment basin embankments, major slope



areas, and similar features. (See new design drawings in E & S Module 1 and Section 8 – Geotechnical Improvements sheet G-1).

200. §102.4(b)(5)(ix): Provide skimmer detail #7-1 for each sediment basin.

Response:

A skimmer is no longer being proposed. A temporary perforation riser is proposed for sediment basin SB-1. (See new design drawings and calculations in E & S Module 1).

201. §102.4(b)(5)(ix): The detail provided for the sediment basins does not show the key trench or impervious core. Provide either the standard detail from the manual, or revise the detail used to include all the same information as the standard detail.

CEC Response:

Sediment basin SB-1 and above-ground stormwater detention facility (SWMF-2) has been relocated on the site to avoid impacting the existing stream and wetlands riparian buffer. The relocated detention facility bottom and embankment is now being constructed by cutting into the in-situ material, which consists of rock and clayey material. Since the detention facility embankment is located entirely in cut and fill material is not required to construct the embankment, an impervious core is no longer being proposed.

202. §102.4(b)(5)(ix): The details provided for skimmer components reference the standard detail numbers from the E&S manual, but the numbers have been removed from the details in the plans. Revise to include detail numbers for cross referencing, as other details reference these details.

Response:

A skimmer is no longer being proposed for sediment basin SB-1. (See new design drawings and calculations in E & S Module 1).

203. §102.4(b)(5)(ix): Provide the typical detail for a sediment basin dewatering device.

Response:

Details for the sediment basin dewatering device (perforated riser) have been added to the E & S Plans. (See new design drawings and calculations in E & S Module 1).

204. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Worksheet #12 for both basins shows that the emergency spillway will be grass lined, but the detail provided is for a riprap emergency spillway. Revise to be consistent.

Response:

Worksheet #12 was revised to show North American Green Shoremax w/S200 Turf Reinforcement Mat installed for the emergency spillway. (See new design drawings and calculations in E & S Module 1).



205. §102.4(b)(5)(viii): Identify the land cover conditions utilized in the routing calculations provided for the sediment basins. Provide supporting documentation that the CN values used are for the maximum runoff condition expected during construction, when some areas will likely be bare soil/unvegetated and potentially not yet paved. Evaluating multiple stages across the construction timeline is recommended.

Response:

Bare earth was used for the maximum runoff condition land cover condition for the drainage area and routing calculation for sediment basin SB-1.

206. §102.4(b)(5)(viii): Explain why “silt loam” was chosen for soil type on sediment basin worksheet #13; geotechnical reports indicate that it is more likely that the basin will be in decomposed rock or bedrock; most soil encountered in these areas were more clayey. What material will be used for embankment construction?

Response:

In accordance with discussions at the Department/ACCD meeting held on 1/20/2026, and based on the geotechnical analysis by the project geotechnical engineer, the site surface primarily consists of sandy soils, and construction activities will predominantly occur within these materials. Although the NRCS soils report classifies the onsite soils as silt loam, onsite runoff during construction is expected to come into contact mainly with sandy and silty soils requiring treatment. The underlying clay unit is overlain by a thick layer of colluvium and is not anticipated to be exposed during construction; therefore, it is not expected to be a significant component of the surface soils during site activities. Therefore, silt loam will be used for Worksheet #13.

207. §102.4(b)(5)(viii): Key trench width on sediment basin worksheet #13 for basin #2 is inconsistent with the value shown on the E&S plan details; revise to be consistent.

Response:

Worksheet #13 was revised. The sediment basin embankment is in a cut section and no key trench is proposed. (See new design drawings and calculations in E & S Module 1).

208. §102.4(b)(5)(vii), §102.4(b)(5)(ix): Identify in the sequence when the stilling basins will be implemented.

Response: No stilling basin is proposed for this project. (See new design drawings and calculations in E & S Module 1).

209. §102.4(b)(5)(ix): Provide the riprap apron details in the E&S set details.



Response:

Riprap apron details with identifiers have been added to the E&S drawings. (See new design drawings and calculations in E & S Module 1).

210. §102.4(b)(5)(ix): Provide compost on the upslope side of the rock filters to make them ABACT.

Response:

Compost has been added to the upslope side of the proposed rock filters detail used on the project site. (See new design drawings and calculations in E & S Module 1).

211. §102.4(b)(5)(ix): Provide scour protection where temporary channel #4 outlets to the receiving stream.

Response:

Channel #4 has been removed and is no longer part of this project or this resubmittal.

212. §102.4(b)(5)(ix): Provide the details for proposed channels in the E&S drawing set.

Response:

One of the E&S detail drawings was inadvertently omitted from the application. These details have now been included in the E&S drawing set. (See new design drawings and calculations in E & S Module 1).

213. §102.4(b)(5)(ix): A detail was provided for a vegetated channel (channel #5) in the E&S set, but this channel could not be located on the drawings and calculations are not provided. Please address.

Response:

The emergency spillway detail has been revised to show North American Green Shoremax w/S200 Turf Reinforcement Mat. As a result, the vegetated channel detail has been removed from the drawings.

214. §102.5(b)(5)(ix): A 5 ft. berm is labeled on the plans, but grading is not shown, and no supporting calculations have been provided. Show all proposed grading, provide a drainage area map, provide supporting calculations, and provide the construction details. Channel calculations/worksheet #11 may be used for berms.

Response:

The 5-foot berm is located along the top of the ridge on the high side of the new driveway. It is a grading feature and is not intended as a structural BMP for erosion and sediment control or stormwater management.

215. §102.4(b)(5)(viii): The permissible velocity design method for channels should only be used for bed slopes less than 10%. Revise channels with steeper slopes by utilizing the allowable shear stress method for design. Note: values were provided in these columns in worksheet #11, but none of those show that the design is meeting the maximum allowable shear stress.



Response:

The channel design and calculations have been revised using the allowable shear stress method. Worksheet #11 has been updated to reflect the revised channel design and to ensure compliance with the maximum allowable shear stress values. (See new design drawings and calculations in E & S Module 1).

216. §102.4(b)(5)(viii): The calculated velocity for temporary channel #4 exceeds the allowable velocity provided. Revise the channel design to meet criteria.

Response:

Previously proposed Channel #4 has been removed and is not included in this project or resubmittal. (See new design drawings and calculations in E & S Module 1).

217. §102.4(b)(5)(viii): Required capacity for permanent channel #1 is not being met by the design. Revise to ensure the channel meets all design requirements.

CEC Response:

Permanent Channel #1 has been reviewed for hydraulic capacity and has been revised to address the identified deficiency. The channel geometry, lining, and longitudinal slope have been adjusted as necessary to ensure that the required design storm flows are conveyed without overtopping, erosion, or loss of conveyance capacity.

Updated hydraulic calculations have been completed using the revised channel parameters, confirming that the channel now meets or exceeds the required capacity for all applicable design storm events in accordance with PADEP E&S and stormwater design criteria.

The revised channel design, including updated cross-sections, profiles, and supporting calculations, has been incorporated into the plan set and PCSWM/E&S documentation.

218. §102.4(b)(5)(viii), §102.4(b)(5)(ix): Per chapter 6 of the E&S manual, channel dimensions should be rounded to an even 6" for constructability. Revise the design/details to account for this.

Response:

The proposed channel dimensions were reevaluated and revised to the nearest 6-inch dimensions.

219. §102.4(b)(5)(ix): Please clarify why the riprap channel detail identifies the emergency spillways as being only 4 ft wide, but they should be 25 ft. wide based on E&S design criteria.



Response:

The new sediment basin SB-1/SWMP-2 has an emergency spillway width of 50'. The new 50' emergency spillway width is shown on the E & S Plans, PCSM Plans, calculations and details. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

220. §102.4(b)(5)(ix): Explain why a rock filter is needed between channels 1 and 2, as they both will be going to a sediment basin.

Response:

The rock filter has since been removed. (See new design drawings and calculations in E & S Module 1).

221. §102.4(b)(5)(ix): Several sections of reinforced slopes are shown near the ridge of the site; there is insufficient room for access/construction of this in terms of proximity to the proposed CFS location. Additionally, the area draining to these sections of CFS has been averaged over a much longer flow length than the immediate steeper slope. Evaluate whether the CFS sizing is appropriate for the amount of steep slope in the drainage area.

Response:

The design has been revised to include eleven stages for E & S. We have labeled all the proposed compost filter socks by stage and shown the flow path on the Stage E & S Plans. We also have included spreadsheets which calculate the slopes of the flow path, indicate size of sock and sock slope length capacity for each section. The CFS proposed below the MSE walls was evaluated for the steep slopes and relocated further down the slope to facilitate installation and maintenance. (See new design drawings and calculations in E & S Module 1).

222. §102.4(b)(5)(ix): Temporary haul roads on previously existing access paths are utilized for this project. Will these be removed and areas restored to vegetation? Identify on the plans/in the sequence what will happen to the roads.

Response:

The construction sequence was updated to include in the final stage the existing access paths which were used as temporary haul roads to be abandoned. (See new design drawings in E & S Module 1).

223. §102.4(b)(5)(ix), §102.4(b)(5)(iii), §102.6(a)(1): Antidegradation Module 3 items to address:
- The E&S page identifies a compost filter berm to be utilized; this is not represented in the details, drawings, etc. for the project. Explain why this is checked.
 - Protect/Utilize Natural Flow Pathways on-site has been checked in the PCSM section. Explain how the current design is doing this considering the amount of Ch 105 impacts that are proposed. This is also not identified in Module 2. Long-term protection also has not been included in the plans with a conservation easement or equivalent.
 - Street sweeping is checked in the PCSM section, but this is not identified in Module 2. Explain.




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- d) All the bioretention facilities are identified as "infiltration" in Module 2, but there is no design infiltration rate. Module 3 also includes Rain Garden with Infiltration as being checked, which is not consistent with what is proposed on the site.
 - e) Module 3 identifies rooftop drain disconnect as being utilized on the site, but this is also nowhere else in the application or drawings.
 - f) Revise Module 3 to accurately reflect what is proposed, for both E&S and PCSM.

CEC Response: The Antidegradation Module 3 form has been updated to reflect the most recent Erosion & Sedimentation Control Plan and Post-Construction Stormwater Management Plan.

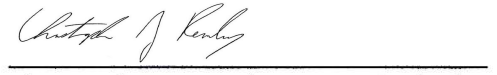
If you have any questions on this submittal, please contact Phillips & Associates, Inc.




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