



January 11, 2023

Jon Altshul, Township Manager
Westtown Township
1039 Wilmington Pike
West Chester, PA 19382

RE: Westtown School – Art School Center
Preliminary/Final Plan Review – RESUBMISSION REQUIRED
Westtown Township
0236-23-0061

Dear Mr. Altshul,

As requested, Cedarville Engineering Group, LLC (CEG) has completed a Preliminary/Final Subdivision and Land Development Review for the Westtown School – Art School Center project. The site (Parcel ID 67-02-00250-00-E) comprises of roughly 170.5 acres and is located on the northwest side of the intersection of Oak Lane and Walnut Hill Road in the Agricultural/Cluster Residential (A/C) Zoning District of Westtown Township. The project includes an addition to the existing Art School Center building and new walkways for a net impervious area increase of 2,422 SF. The applicant is proposing an underground BMP to manage the increase in stormwater runoff.

The following information was received by our office on December 15, 2022:

- A. Cover letter prepared by Riley Riper Hollin & Colagreco, dated December 14, 2022.
- B. Full size Plans titled “Westtown School – Art School Center” prepared by Apex Design + Engineering Group consisting of 10 sheets, Sheets 1-7 of 7, dated November 15, 2022.
- C. Landscape Architecture Plan Sheets L-101, L-102, and L-401, prepared by Wallace, Roberts, and Todd, LLC, dated October 28, 2022.
- D. Post Construction Stormwater Management Report prepared by APEX Design + Engineering Group, dated November 11, 2022.
- E. Westtown Township Application for Approval of Preliminary Plan/Final Plan, dated November 28, 2022.

The referenced documents have been reviewed for compliance with Chapter 80 – Erosion, Sediment Control and Grading, Chapter 144 – Stormwater Management, Chapter 149 – Subdivision of Land, and Chapter 170 – Zoning of the Westtown Township Ordinance.

Cedarville Engineering Group, LLC

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The following comments are offered for your consideration:

EROSION AND SEDIMENT CONTROL COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 80, EROSION, SEDIMENT CONTROL AND GRADING):

1. *Section 80-5.B - A topographical survey of the site, at a suitable scale of no less than one inch equals 50 feet and contour interval of no more than two feet zero inches, prepared by a registered surveyor or registered engineer, including also a boundary line survey, the location and description of vegetative cover, soil types (available from Chester County Soil Conservation District) and any other pertinent existing natural or man-made features.*

Section 80-5.D - A written description of soil erosion and sediment and control measures (with appropriate plans and specifications), in accordance with standards and specifications of the USDA Soil Conservation Service, Chester County Conservation District and township ordinances, including, without limitation, retention basins or other control measures necessary to limit the rate of stormwater runoff to comply with the requirements of § 80-6C hereof.

The following shall be addressed:

- An additional rock construction entrance shall be provided to where equipment is to access the north section of the project area, adjacent to the landscaped walkway and building addition.
- The temporary rock construction as shown on the Erosion and Sedimentation Control Plan shall be increased to a minimum length of fifty (50) feet, in accordance with the Stabilized Construction Entrance Detail.
- Compost filter sock #4 shall be extended both directions to prevent sediment from exiting the site between it and sock #3 and #5.
- There are two compost filter socks labeled #1 and #2. These compost filter socks shall be relabeled consistently with the other compost filter socks on the Plan.

STORMWATER MANAGEMENT COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 144, STORMWATER MANAGEMENT):

2. *Section 144-305.A - The post-construction total runoff volume shall not exceed the predevelopment total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation (design storm). The water quality and runoff volume to be managed shall consist of any runoff volume generated by the proposed regulated activity over and above the predevelopment total runoff volume and shall be captured and permanently retained or infiltrated on the site. Permanent retention options may include, but are not limited to, reuse, evaporation, transpiration, and infiltration.*

The following shall be addressed:

- The Stormwater Riser #1 detail shall be revised to include a top view showing the vertical risers, ladder, pipe connections, outlet pipe direction, and how it is secured.





- The location of Stormwater Riser #1 shall be clearly shown on the Stormwater Management System #1 detail.
 - The disturbed area on the Plan (0.85 acres) and volume controls worksheet in the Report (1.06 acres) shall be revised to be consistent with one another.
 - The Runoff Calculations on Page 19/75 of the Report shall be revised to accurately sum total areas in both square feet and acres. The calculations show areas of 49,192 square feet and 1.060 acres for existing conditions and areas totaling 46,192 square feet and 1.049 acres for developed conditions.
3. *Section 144-305.F – Runoff from the disturbed area shall be treated for water quality prior to entering existing waterways or water bodies. If a stormwater management practice does not provide water quality treatment, then water quality BMPs shall be utilized to provide pretreatment prior to the runoff entering the stormwater management practice.*

A snout or other water quality control shall be provided for the Small Park Grate #2 and trench drain TD #1 prior to stormwater entering the PCSM System #1. Applicable Operation and Maintenance notes shall be provided.

4. *Section 144-306.P – All infiltration practices shall have appropriate positive overflow controls*

Section 144-310.G – Adequate erosion protection and energy dissipation shall be provided along all open channels and at all points of discharge. Design methods shall be consistent with the Federal Highway Administration Hydraulic Engineering Circular Number 11 (Publication No. FHWA-IP-89-016, as amended) and the PADEP Erosion and Sediment Pollution Control Program Manual (Publication No. 363-2134-008, as amended), or other design guidance acceptable to the Municipal Engineer.

The proposed level spreader length shall be increased to a minimum of 10 feet per 1 cfs of discharge in accordance with the Pennsylvania BMP Manual BMP 6.8.1 Level Spreader, most recent edition. The calculations reference a discharge of 2 cfs during the largest storm event routing, therefore length of the level spreader shall be increased to a minimum of 20 feet.

5. *Section 144-310.D – Conveyance facilities to or exiting from stormwater management facilities (i.e., detention basins) shall be designed to convey the design flow to or from the facility.*

The following shall be addressed:

- A small berm shall be provided immediately down-drain of the proposed trench drain to ensure the full runoff volume of the drainage area to TD #1 is captured and conveyed to the PCSM System #1.



- Angling of the trench drain and/or efficiency/capture calculations shall be provided demonstrating the chosen trench drain grate is able to successfully capture the stormwater runoff intended to be conveyed to PCSM System #1.
6. *Section 144-402.B.(3) - A statement, signed by the applicant, acknowledging that any revision to the approved SWM site plan shall be submitted to and approved by the municipality, and that a revised erosion and sediment control plan shall be submitted to, and approved by, the Conservation District or municipality (as applicable) for a determination of adequacy prior to construction of the revised features.*

The statement shall be signed by the applicant prior to final Plan approval.

7. *Section 144-402.C.(11) - Existing and proposed man-made features including roads, paved areas, buildings, and other impervious and pervious surfaces on the project property (or an appropriate portion of the property as determined in consultation with the Municipal Engineer) and within the proposed disturbed area, and including the type and total area of the following:*
- (a) Existing impervious surfaces;*
 - (b) Existing impervious surfaces proposed to be replaced;*
 - (c) Existing impervious surfaces to be permanently removed and replaced with pervious ground cover;*
 - (d) New or additional impervious surfaces; and*
 - (e) Percent of the site covered by impervious surfaces for both the existing and proposed post-construction conditions.*

The below referenced discrepancy regarding the total proposed impervious surface shown on the Plan and Report shall be revised to be consistent with one another.

- The Stormwater Management Plan (Sheet 5) notes a proposed net impervious area increase of 2,422 square feet.
 - The provided Report references a proposed net impervious area increase of 2,652 square feet. (Predevelopment drainage area references an 80% impervious area of 12,791 square feet or 100% impervious area of 15,989 square feet and the post-development drainage area references an impervious area of 18,641).
8. *Section 144-402.C.(18).(c) - Easements, as per the requirements of Article VII.*

Section 144-402.C.(18).(c).[2] - Notes or other documentation, as needed, to grant the municipality the right of access to all BMPs and conveyances for the purposes of inspection and enforcement of the requirements of this chapter, and any applicable O&M plans and O&M agreements.

An easement shall be granted to the municipality granting them the right, but not the obligation, to inspect and repair the BMP. If a blanket easement is to be offered, it shall be



clearly noted on the Plan to be recorded with the Stormwater Management Operations & Maintenance Agreement.

9. *Section 144-402.G – Inspections, operation, and maintenance requirements. The following documents shall be prepared and submitted to the Township for review and approval as part of the SWM site plan, in accordance with the requirements of Article VII, for each BMP and conveyance included in the SWM site plan (including any to be located on any property other than the property being developed by the applicant);*
 - (1) *An O&M Plan.*
 - (2) *An O&M Agreement.*
 - (3) *Any easement agreements that are needed to ensure access, inspection, maintenance, operation, repair and permanent protection of any permanent BMP(s) and conveyances associated with the regulated activity.*
 - (4) *Any written deed, deed amendment or equivalent document (if needed) to be recorded against a subject property, as shown on the SWM site plan maps or plan sheets, or recorded plan sheets for the purpose of protecting and prohibiting disturbance to a BMP or conveyance; and*
 - (5) *Written approval, easement agreements, or other documentation for discharges to adjacent or down-gradient properties when required to comply with § 144-301G and Article VII of this chapter.*

Section 144-701.D – General Requirements for protection, operation and maintenance of stormwater BMPs and conveyances – For any BMP or man-made conveyance (including any to be located on any property other than the property being developed by the applicant) to be owned by a person other than the Township:

- (1) *An O&M agreement shall be submitted to the Township for review and approval; and*
- (2) *The O&M plan shall be attached to, incorporated within, and recorded as a public record along with a fully executed O&M agreement, all of which shall be recorded as a restrictive covenant that runs with the land and shall be binding upon the landowner and any heirs, administrators, successors in interest or assigns of the landowner.*

A Stormwater Management Operation & Maintenance Agreement shall be executed and recorded for the proposed stormwater BMPs, to include all BMPs shown on the PCSM Plan. The O&M Agreement shall be provided by Westtown Township upon approval of the Plan and shall be recorded concurrently with the Land Development Plan.

SUBDIVISION AND LAND DEVELOPMENT COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 149, SUBDIVISION OF LAND):

10. *Section 149-403.A – Before the final plan is signed by the Board of Supervisors, the applicant shall submit an agreement, subject to the approval of the Board of Supervisors, provided for, but not limited to, the following where applicable: In accordance with the approved final plan, the applicant will layout and construct all street and other improvements, including, but not limited to, grading, paving, curbs, gutter, sidewalks,*





streetlights, fire hydrants, water mains, street singes, shade trees, storm and sanitary sewers, stormwater management structures, landscaping, traffic control devices, open space areas, and erosion and sediment control measures.

Section 144-403.C – The applicant shall sign a tri-party agreement with a financial institution and the Township guaranteeing and securing completion of the improvements listed in Subsection A, except as provide for in Subsection E, within one year of the date of the approved plan.

Financial security of an amount acceptable to the Township shall be provided prior to Plan recording. A Construction Cost Estimate shall be submitted for review and approval, with the required financial security incorporated into a Developer’s Agreement to be executed prior to Plan recording. The Applicant’s Engineer shall contact the Township Engineer regarding the improvements in which financial security is to be posted.

11. *Section 149-602.B.(8) – Location and elevation of the bench mark to which contour elevations refer. Where reasonable and practical, datum used shall be USGS (United States Geodetic Survey) from a known, established bench mark. All subdivisions and/or land developments shall have an actual field run or aerial topography.*

The following shall be addressed:

- The datum and benchmark mentioned on Sheet 3 in General Note # 6 shall be labeled on the Plan.
- The contours shown between the proposed sidewalk to the west of the building and the proposed BMP are segmented and terminate/begin without tie-in to another contour or feature. Contours in this area shall be revised to satisfactorily combine aerial topography and any field survey data.

12. *If the preliminary plan and all supporting data comply in all respects with the requirements for final plans (see Article VII), the Township may, in the case of small subdivisions involving no new streets or limited development of land, proceed to final action at the first consideration of the plan if a written request for final approval is made by the applicant and agreed to by the Board of Supervisors.*

Section 149-700.A – Within 60 days after approval of the preliminary plan, a final plan and all necessary supplementary data shall be officially submitted to the Township. However, an extension of time may be granted at the option of the Board of Supervisors upon written request of the applicant.

The referenced Ordinance section requires that a Preliminary Plan be submitted and reviewed prior to review of a Final Plan. CEG offers no objection to consideration of a waiver from this section of the Ordinance.



13. *Section 149-804.B.(3) – Complete description of both existing and proposed fire protection facilities within the tract, and where applicable within all abutting properties. Specifications shall comply with those found in §§ [149-917](#) and [149-918](#) of this chapter.*

The proposed fire protection methods for the proposed project are subject to the review and approval of the Township Fire Marshall.

14. *Section 149-916.A – All materials entering into the construction of sidewalks and the method of construction and installation shall be in accordance with PennDOT Specifications Publication 408, except that the compacted thickness of the aggregate bed shall be four inches. Sidewalks across driveways and driveway aprons shall be constructed with six inches of concrete reinforced with six by six w1.4 by w1.4 welded wire fabric placed two inches from the finished surface. Sidewalks shall have a minimum width of four feet and be located four feet behind the curbline unless approved otherwise.*

Section 149-916.C – Details and specifications for the construction of bike paths and other paths shall be submitted with preliminary plans for review and approval by the Township Planning Commission and Township Engineer.

A detail with construction specifications for the proposed walkway in front and behind the building shall be added to the Plan.

15. *Section 149-924.A – Neither portions of tree masses nor specimen trees shall be cleared unless absolutely necessary. Applicants shall make all reasonable efforts to harmonize their plan in order to preserve these existing trees.*

Section 149-924.D.(12) – Compensatory Planting

Section 149-924.D.(12)(a) – In the event that preservation of existing trees within the tree protection zone is impossible, and/or relocation of improvement impractical, then compensatory planting shall be required for each viable tree protection zone and specimen tree anywhere else on the site.

Section 149-924.D.(12)(b)[2] – For viable specimen: on inch of new tree diameter for every on inch of existing tree diameter cut or removed. Where it has been determined by the Zoning Officer that a specimen tree shall be or is proposed to be cut or removed, the person responsible shall be fined no more than \$1,000.

The purpose of the alignment of the proposed sidewalk to the west of the north entrance, where the 16” dbh tree must be removed, shall be clarified. The Applicant shall determine the health of the tree and;

- In the event the tree is blighted, in poor condition, and/or a safety hazard a replacement tree shall be provided.



- In the event the tree is healthy or a specimen tree:
 - Investigate an alternative layout to the provided sidewalk, or
 - Relocate the tree.

16. *Section 149-925.H.(3) – Shrubs, hedges, yews: two feet in height*

The following shall be addressed:

- The Landscape Plan shall note that all shrubs shall have a minimum planting size of two (2) feet in height.
- The Aster Wood’s Light Blue shrub shall be revised to a shrub with a minimum planting size of two (2) feet.

17. *Section 49-925.I.(2) – A two-year maintenance and replacement guaranty shall be provided to the Township by the landscape contractor. All plantings which do not survive after the expiration of the maintenance guaranty shall be replaced by the owner.*

A note shall be clearly shown on the Plan regarding a maintenance guaranty for the proposed plantings.

ZONING COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 170, ZONING):

18. *Section 170-402.C.(1).(a) – Prohibitive slope. Prohibitive slopes are those of greater than 25% delineated and measured over a six-foot or greater difference in vertical elevation, as based on a site survey or on the United States Geological Survey Topographic Maps of the Regional Base Map Series of 1973 for the West Chester Quadrangle (i.e., sloping more than 25 feet vertical over a distance of 100 feet horizontal), where such slope exists over any continuous horizontal distance of 50 feet or more, as measured parallel to the contour lines.*

Section 170-402.C.(1).(b) – Precautionary slope. Precautionary slopes are those of 15% to 25% delineated and measured over a six-foot or greater difference in vertical elevation, as based on a site survey or on the United States Geological Survey Topographic Maps of the Regional Base Map Series of 1973 for the West Chester Quadrangle (i.e., sloping 15 to 25 feet vertical over a distance of 100 feet horizontal), where such slope exists over any continuous horizontal distance of 50 feet or more, as measured parallel to the contour lines.

The applicant shall provide shading/hatching to clearly delineate all areas of Prohibitive and Precautionary slopes (as defined above) within and adjacent to the work area.

19. *Section 170-1514.B.(1) – Outdoor lighting shall be required for safety and personal security for uses that operate during hours of darkness where there is public assembly and traverse, including but not limited to the following uses: all residential developments, commercial, industrial, public-recreational and institutional.*





A Lighting Plan shall be provided to demonstrate compliance with the applicable provisions of the above Ordinance section.

GENERAL COMMENTS

20. The following shall be addressed for the 4' wide sidewalk located west of the Arts Center building:
 - Shaded with the color according to the legend for sidewalk.
 - Proposed grading and spot elevations shall be provided for the length of the sidewalk.
21. Spot elevations shall be provided for the landscape area/walkway(s) to the north of the Art Center building at all tie-in locations.
22. It is unclear what the circles on the existing concrete area immediately east of the proposed walkway in the front of the building represent. This feature shall be labeled, added to the legend, or removed as necessary.
23. It appears that proposed grading/spot elevations have been placed on the existing concrete surface to the east of the proposed walkway. If this area is to be replaced the limits of replacement shall be clearly shown, otherwise the proposed spot elevation(s) shall be removed.

Please do not hesitate to contact me with any questions.

Best Regards,
Cedarville Engineering Group, LLC

Robert E. Flinchbaugh, P.E.
Municipal Team Lead

cc: Katherine Archibald, Building Permits, On-Lot Sewage Management Coordinator – Karchibald@westtown.org

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