



September 23, 2014

ASTW 0038

John Granger, Township Manager
Aston Township
5021 Pennell Road
Aston, PA 19014-1869

**RE: Aston Technical School – Delaware County Intermediate Unit (DCIU)
100 Crozerville Road
Preliminary Land Development Review**

Dear John:

As requested, we have reviewed the following information, prepared by G.D. Houtman & Son, Inc., in connection with the referenced project:

- *“Preliminary/Final Land Development Plans: Additions & Renovations to Aston Technical School”* (thirteen sheets), dated December 5, 2013, last revised August 17, 2014.
- *“Stormwater Management & Sediment & Erosion Control Calculations”* dated December 5, 2013, last revised August 15, 2014.
- Response letter dated February 4, 2014 (received August 19, 2014) and supplemental information.

The applicant, Delaware County Intermediate Unit, proposes to construct two (2) building additions totaling 59,640 s.f. and associated parking, landscaping, lighting and stormwater management controls at the existing Aston Technical School on Tax Map Parcel 02-06-104. The site contains 13.042 acres and is located in the Institutional (ID) Zoning District. Access to the site will continue to be provided via two driveways to Spring Valley Way and one driveway to Crozerville Road. The property is served by public water and sewer.

The applicant is concurrently seeking Conditional Use approval to permit the proposed school expansion in the ID District (§1279.03(a)) and utilities within areas of very steep slopes (greater than or equal to 25%) (§1288.05(a)(2)C).

Additionally, the applicant has requested three (3) waivers, as noted on Sheet 1:

1. From §1232.02(a) requiring a preliminary plan submission;
2. From §1234.10(a)(1) requiring all property owners to install, construct and maintain sidewalk and curbing along such property abutting any street; and
3. From §1232.05(b)(7) requiring the plan to indicate all existing utilities and features within 200 feet the tract boundaries.

The following comments from our December 12, 2013 and January 2, 2014 review letters remain outstanding (new comments in *italics*):

ZONING

1. The proposed school use is permitted in the Institutional District as a conditional use. (§1279.03(a)) The Board of Commissioners shall consider the general standards for conditional uses outlined in §1290.02.

This issue will remain outstanding pending Conditional Use approval.

2. Outdoor storage areas must be completely screened from adjoining properties by a solid fence or wall not less than six (6) feet in height. (§1279.04(i))

Fencing has been provided to the easternmost drive aisle from Spring Valley Way; the Board should verify if this screening is adequate.

3. Not less than ten (10) feet of the required open space along each side or rear property line which directly abuts a residential district shall be used only as a buffer planting strip as defined in §1250. (§1279.06(c))

The 10-foot buffer should be graphically indicated on the site and landscaping plans.

4. Any accessory building or structure which is industrial or nonresidential in appearance shall be suitably screened or shall be located so as to be least observable from a public street or property line. (§1279.06(d)) Two (2) existing accessory buildings are proposed to be relocated closer to Spring Valley Way. The applicant should confirm that existing and proposed vegetation will provide adequate screening.

Fencing has been provided to the easternmost drive aisle from Spring Valley Way; the Board should verify if this screening is adequate.

5. In accordance with §1284.03, 300 parking spaces are required for this development. The applicant is proposing 256 parking spaces, with an additional 44 spaces in reserve to be installed at the discretion of the Board of Commissioners.

The record plan indicates reserve parking spaces to be installed within six (6) months from receipt of the formal request by the Board.

6. A separate loading area has not been provided for the Early Education addition. The applicant should clarify how deliveries will be made to this section of the building. If an additional loading area is warranted, it should be designed in accordance with §1284.07.

All loading areas should be graphically indicated per §1284.07(b) and truck turning templates should be provided per §1284.07(c) and (d). All off-street loading berths shall be provided on either the side or rear of the lot. In no case shall off-street loading berths be provided in the front of the lot. (§1287.07(f)) This issue will remain outstanding pending the identification of the loading berths.

7. Regarding screening and landscaping requirements for parking areas:
 - a. All off-street parking areas which provide more than five (5) parking spaces shall be screened from any abutting property in a more restrictive zoning district. When planted visual screens are employed, a buffer planting strip with a minimum width of ten (10) feet shall be provided. Planted visual screens shall be of sufficient height and density to constitute a continuous visual screen six (6) feet in height. (§1284.08(a)(1), (4)(A), (4)(B))
Per §1250, a planted visual screen is defined to consist of dense evergreens which shall be planted not farther than eight (8) feet from one another. The screens buffering parking from Crozerville Road and Spring Valley Way do not meet this spacing; additional plantings are required to meet the required density.
 - b. *Regarding interior parking lot plantings, shrubs and other plant materials are encouraged to be used to complement the trees. (§1284.08(b)(2)) No shrubs are proposed within the parking islands.*
 - c. *Landscaped areas at least five (5) feet wide shall be provided around the periphery of parking areas. (§1284.08(b)(3)) This 5-foot buffer should be indicated.*

8. Conditional use approval is required for utilities located within the steep slope conservation district. (§1288.05(a)(2)(C)) The Board of Commissioners shall consider the standards for conditional uses outlined in §1290.02 and §1288.06.

This issue will remain outstanding pending Conditional Use approval. Additionally, all applications for any use of land in the Steep Slope Conservation Districts shall include the following:

- a. *Architectural plans of the exterior and foundation of the proposed structure. (§1288.07(d))*
 - b. *Profile of the entrance drive(s) and providing public access. (§1288.07(e))*
 - c. *A statement indicating all methods to be used in overcoming any structural or physical problems created by steep slopes, how the existing environment will be protected and how materials will be delivered to the site without disrupting the environment, signed and sealed by a registered architect or engineer. (§1288.07(f))*
 - d. *A statement signed by the applicant at the time of subdivision, land development, or building permit application stating that there is a full understanding of all difficulties associated with access to sites containing or being near steep or very slopes. (§1288.07(g))*
9. All new construction on lots where there is currently no sidewalk shall install a sidewalk with handicapped curb cut ramps at the crosswalks. (§1292.03) Sidewalk and curbing should be provided along Spring Valley Way, Birney Highway, and Crozerville Road. The sidewalk along Spring Valley Way should connect to the existing sidewalk located near the southeastern property line. Crosswalks and ADA ramps should be provided at intersection and driveway crossings. Additionally, internal site sidewalk should be provided connecting to the sidewalk along the adjacent roadways.

This requirement has not yet been met, with the exception of the sidewalk indicated between the two (2) access drives along Spring Valley Way.

10. On any corner lot, no wall, fence, or other structure shall be erected or maintained, and no hedge, tree, shrub, or other growth shall be planted, grown, or maintained which may cause danger to vehicular traffic by obscuring the view or in any other way be a source of danger. (§1292.05(a))

Clear sight triangles should be indicated at all street intersections. Additionally, it is recommended clear sight triangles and sight distances be indicated at all driveway accesses on the site and landscape plans. Screening shall be designed so as not to obstruct sight distances at intersections. (§1292.20(b)(5))

11. No wall, fence, hedge, or other similar structure or growth shall extend into any front yard. (§1292.08(a))

Fencing for the dumpsters at the rear of the Special Programs Addition is within the front yard.

12. Existing trees shall be preserved wherever possible. The protection of existing trees 12 inches or more in caliper shall be a factor in determining the location of buildings, open space, structures, underground utilities, walks and paved areas. (§1292.19(e)(3)(D)) Existing 12-inch or more caliper trees should be identified on the plan.

This requirement has not yet been met.

13. Four (4) evergreen and/or deciduous shrubs shall be planted for every 20 feet of length of building façade. (§1292.19(f)(2)(C)) The locations of the building façade shrubs should be indicated on the plan.

It is recommended the Plant Schedule on the landscape plan identify the plantings proposed for each requirement, i.e., parking lot (§1284.08), screening (§1292.20) and foundation (§1292.19(f)(2)), in order to verify no overlap of plantings.

14. The applicant should confirm that mechanical equipment will be screened in accordance with §1292.20(b)(8,9).

Note 17 has been added to Sheet 1; proposed mechanical screening should be indicated on the landscape plan.

15. Conditional use approval is required for the proposed geothermal systems. (§1290.27) Design details should be provided for the geothermal systems.

The applicant has indicated this information will be submitted; however, it appears the geothermal systems have been removed from the plan. Additionally, the construction sequence should remove reference to the geothermal well fields, if not proposed.

16. *Because of the unique character of institutional land, it is not necessarily true that land zoned so as to permit one institutional use by right or by condition may be suitable to permit another use of a different character, even though that use may also be permitted as a use by right or by condition in the Institutional District. (§1279.08(a)) In the event of the nonuse, abandonment, or change in the current use of any institutionally zoned land, the Planning Commission, on its own motion or upon petition for rezoning, shall review the specific site and make a recommendation to the Board of Township Commissioners concerning the most appropriate use for the site and shall recommend a zoning district classification for the Zoning Map to accommodate such use. (§1279.08(b)) The Board should review the proposed use to determine if a motion is required from the Planning Commission.*
17. *Parking spaces for the handicapped shall have a minimum 5-foot-wide access aisle on both sides. (§1284.05(c)) This has not been met for all ADA spaces.*
18. *Accessory structures shall be located, erected and maintained in side or rear yard areas only. (§1292.06(a)) The applicant should verify if the electrical equipment area fronting Crozerville Road consists of an accessory structure.*
19. *Regarding the required screens buffering the proposed use from residential districts per §1292.20, the following should be addressed:*
 - a. *Per §1250, a planted visual screen is defined to consist of dense evergreens which shall be planted not farther than eight (8) feet from one another.*
 - b. *Plant materials used in screening shall be at least six (6) feet in height when planted, and no plantings shall be placed with their center closer than five (5) feet from the property line of the tract. (§1292.20(b)(3))*
 - c. *Screens shall be perpetually maintained during the period the principal use causing the need for screening is in operation. Any plant material which does not survive shall be replaced within six months. (§1292.20(b)(7))*

SUBDIVISION AND LAND DEVELOPMENT

20. *Per the preliminary/final plan requirements (§1232.05,06), the following shall be provided:*
 - a. *The name and seal of the professional land surveyor. (§1232.05(b)(1))
The seal of the professional land surveyor remains to be indicated.*
 - b. *A copy of any existing or proposed deed restrictions or protective covenants applying to the proposed developments. (§1232.06(b)(7))
The applicant has indicated this information will be provided.*
 - c. *The location of all monuments at the permanent outbounds of the site. (§1232.06(b)(12))*
 - d. *The heights of all structures. (§1232.06(c)(1))*
21. *Trees with a minimum trunk caliper of six (6) inches, measured eighteen (18) inches above ground, shall be maintained or replaced immediately following construction. Replacement trees shall be a minimum 2-inch caliper. (§1234.09(c)(4))*

22. *A walkway system no less than four (4) feet wide should be provided for access linking buildings to each other and to parking areas. (§1242.06(a))*

STORMWATER MANAGMENT

The following comments per our January 2, 2014 review letter have been addressed herein.

23. Regarding the permanent above-ground basins:
- a. Per the BMP Manual, basin embankments should have side slopes no steeper than 3:1.
It is our recommendation 3:1 side slopes be provided.
 - b. The Basin #2 cross-section should indicate the sediment trap bottom elevation.
Sediment trap elevations remain to be provided on the basin cross-sections; per the PA BMP Manual, it is recommended the sediment basin and trap be set one (1) foot above the permanent elevations.
24. An operation and maintenance (O&M) plan prepared by the applicant is required; the O&M plan shall outline required routine maintenance actions and schedules necessary to ensure proper operation of the facilities. (§702.A)

The applicant has indicated a copy of this plan has been included in this application; we are not in receipt of this information.

25. *Additional information regarding the infiltration testing should be provided (i.e., type of testing, field reports, etc.). Per the PA BMP Manual, double-ring infiltrometer tests are recommended.*
26. *The following discrepancies regarding the plan and report should be addressed:*
- a. *The emergency spillway calculation and width for Basin #1 should be updated to reflect the revised 100-year inflow (i.e., 45 cfs).*
 - b. *The Basin #1 cross-section indicates 3:1 side slopes; the plan scales to 2.5:1 side slopes.*
 - c. *For Basin #2, the report and detail should be reviewed for the following: 2.75-inch orifice versus a 3.25-inch orifice; 3.5-inch orifice at 286.5 feet versus 286 feet; and a 15-inch outlet pipe versus an 18-inch outlet pipe. The Basin #2 detail additionally indicates an incorrect top of riser and outlet pipe elevations.*
 - d. *The Area #2 volume (net 2-year) calculation indicates 4,708 s.f. of existing impervious area, while the routing indicates zero impervious in the pre-development condition; the volume calculation should be revised.*
 - e. *The profiles should be reviewed to verify correct structures (manhole versus inlet) have been indicated (i.e., Manhole #8, Manhole #20, etc.).*
 - f. *The profiles should be reviewed to verify all utility crossings have been indicated (i.e., Inlets 4 through 6, etc.).*
 - g. *The pipe capacity calculations indicate a 30-inch pipe from Inlet #29 to Endwall #30; the profile indicates a 24-inch pipe.*
 - h. *The construction sequence references Aston Mills Road; please update.*

27. *As a new Stormwater Management Ordinance was recently adopted in March, 2014, it is recommended the applicant meet the following requirements:*
- a. *Regarding infiltration testing, a detailed soils evaluation, performed by a qualified design professional (i.e., geotechnical engineer, soil scientist, etc.) is required. (§23-305.B)*
 - b. *Streambank erosion requirements in accordance with §23-307, requiring the proposed conditions 2-year, 24-hour design storm be reduced to the existing conditions 1-year flow.*
 - c. *The use of the Rational Method to estimate peak discharges for drainage areas greater than five (5) acres shall be permitted only upon approval of the municipality. (§23-309.A)*
 - d. *A specified amount to the Municipal Stormwater Control and BMP Operation and Maintenance Fund. Notably, if the stormwater control or BMP is to be privately owned and maintained, the deposit shall cover the cost of periodic inspections performed by the Municipality, as estimated by the municipal engineer, for a period of ten (10) years. This is to be paid in a manner specified by the municipality. (§23-708.A.1)*

TRAFFIC

28. *The proposed expansion will result in a significant increase in vehicular and bus trips to and from the project site. Based on the provided traffic study, site traffic will increase from 59 trips to 249 trips during the AM School Peak hour, and from 47 trips to 252 trips during the PM School Peak hour. As such, it is recommended that the study area be expanded to include the intersections of Aston Mills Road, Concord Road & Convent Road, Birney Highway & Bodley Road, Birney Highway & Lenni Road, and Llewellyn Road & Valleybrook Road.*
29. *Based on projected volumes, warrants are exceeded for a left turn lane from Birney Highway onto Spring Valley Way in accordance with Chapter 11.16 (Turn Lane Guidelines) in PennDOT Publication 46 Traffic Engineering Manual. Also, warrants may be met for a right turn deceleration lane from Birney Highway onto Spring Valley Way, depending on the 85th percentile speed. Based on a review of the subject intersection, a deceleration lane should be provided due to the type of turning traffic and sight distance. The applicant should prepare design plans for the turning lanes in accordance with PennDOT requirements in order to obtain a Highway Occupancy Permit.*
30. *The main entrance driveway on Spring Valley Way is proposed to be located 265 feet east of Birney Highway. As this access will serve as the only means of ingress for both passenger vehicles and bus traffic during the peak hours, there is concern that cars and buses attempting to turn left into the site will queue back onto Birney Highway, blocking through traffic.*
31. *The traffic study should include an analysis of on-site circulation, identifying areas for both bus and parent pick-up/drop-off and reviewing the impact that bus and parent vehicle stacking will have on site circulation and access into and out of the site.*

32. *Additional information should be provided regarding the projected trip generation, including assumptions on arrival and departure times for both vehicular and bus traffic.*
33. *Consideration should be given to adjusting the peak hour factors to account for the increase in traffic associated with the development.*
34. *The applicant should include background traffic for the full build-out of the industrial park located on the western side of Birney Highway to determine future impacts at the study area intersections.*
35. *Additional information should be provided regarding the proposed “swing gate” at the main site driveway to Spring Valley Way. The traffic study does not include exiting trips at this location during the studied periods.*

GENERAL

36. Sight distance is limited for vehicles turning onto Birney Highway from Spring Valley Way, specifically looking to the left (south). Since this development will be installing stormwater management improvements along Birney Highway in the vicinity of the sight distance issue, the applicant should modify the grading along the eastern side of Birney Highway to improve the sight distance.

The applicant has indicated this issue will be addressed, as necessary, during the installation of the off-site storm sewer; the record plan should note the same.

37. The driveway to Spring Valley Way located closest to Birney Highway should allow for two-way traffic so that vehicles parked in the western parking area can exit the site without traversing the drop-off/pick-up areas.

The plan indicates “one-way entrance only” at this driveway.

38. Structural design calculations should be provided for the proposed retaining walls.

The applicant has indicated this information will be provided at the time of building permit application.

39. *The record plan should note that plan approval does not include signage approval; all signage is subject to the rules, regulations and permit requirements of the Township (§1282).*

40. Please additionally note the status of the following reviews/permits:

Review/Permit	Agency/Authority	Status
Sanitary Sewer	SWDCMA	Correspondence has not yet been received.
Planning Module	PaDEP	Correspondence has not yet been received.
HOP	PennDOT	Correspondence has not yet been received.
E&S/NPDES	DCCD/DEP	Correspondence has not yet been received.
Water Facilities	Water Utility	Correspondence has not yet been received.
County Planning	DCPD	January 16, 2014 review letter.
Fire Protection	Fire Marshal	Correspondence has not yet been received.
Conditional Use	BOC	Correspondence has not yet been received.

If you have any questions, please feel free to contact the undersigned.

Sincerely,

PENNONI ASSOCIATES INC.



Joseph Viscuso, PE, PLS
Township Engineer

JJV/mws

cc: Hugh Donaghue, Esq.
G.D. Houtman & Son, Inc.
MM Architects, Inc.
All Commissioners
Elizabeth Naughton-Beck, Esq.
Joe McColgan
Vincent Mancini, Esq.