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PHASE 1A LAND DEVELOPMENT PLAN REVIEW LETTER #1

MIDDLESEX TOWNSHIP, CUMBERLAND COUNTY, PA

Attn: Mr. Bud Grove, Township Engineer

PAX-1/PROJECT BOLT DATA CENTER

OCTOBER 14, 2025

We have completed our review of the following information for the above-referenced project:

Submission:	Dated:	Last Revised:
Plan Sheets 1-64 of 64 [Plan]	August 18, 2025	--
Post Construction Stormwater Management Report [SWM Report]	August 17, 2025	--
Time Extension Letter	August 20, 2025	--
Environmental Impact Assessment	August 2025	--
Preliminary Geotechnical Report	June 5, 2024	--
BERN 500 Kv Substation Geotechnical Report	July 2, 2025	--
Wetland Delineation Report	June 12, 2024	--
Application and Checklist	August 18, 2025	--
Submission Memo and Letter of Transmittal	August 18, 2025	--

The applicant has submitted the following requests for relief:

Requested Waiver[s]:	Ordinance Section:
Plan Sheet Scale > 1" = 50 ft	501.A.2

We offer the following comments [* - Indicates comments not addressed from previous review letters]:

ZONING

1. Provide a water feasibility study addressing all requirements of the Ordinance [Ord 3-2025 24.07].
2. Data Center Zoning Overlay requires an Electric and Noise Study. These do not appear to have been submitted. [Ord 3-2025 24.08 and 24.09].
3. Submit an interconnection agreement from the electric service provider [Ord 3-2025 24.08]
4. Proposed lot coverage and impervious are both shown as <70%. Provide actual percentage, along with Acre/SF. [Ord 3-2025 24.03].
5. Proposed building height is shown as <75ft. Provide actual building height. [Ord 3-2025 24.03]
6. Parking requirements are noted as TBD. Provide actual quantitative parking requirements. [Ord 3-2025 24.04.B and 14.10]
7. Within the Zoning Regulations, sheet C1A 002, minimum rear yard setback should be 35 ft. Revise the table and Plan sheets accordingly. [Ord 3-2025 24.03].
8. Within the Zoning Regulations, sheet C1A 002, revise the Building Façade requirement to note that it shall apply to all Building Facades that are orientated and face toward an abutting: [1] public street, [2] lot with an residential use within 1,000 feet of the Building Façade; or [3] lot within a Residential District within 1,000 feet of the Building Façade [Ord 3-2025 24.04.A.1]
9. It appears the Substations would be considered as mechanical equipment. Mechanical equipment shall be screened on all sides. It appears some evergreen trees are proposed; however this may not provide screening on all sides. Revise the Plan accordingly. [Ord 3-2025 24.04.B.2.a.[1]].
10. On the Landscape Sheets a landscape table is included. The plant material shall be labeled in plan view and quantity noted in the landscape table. This will assist with confirming the mechanical equipment screening is appropriate. [Ord 3-2025 24.04.B.2.a.[1]].
11. Soundproofing of mechanical equipment shall be provided on the exterior of the lot abutting a lot with an existing residential use. This requirement shall be noted within the Zoning Regulations, sheet C1A 002. Alternatively, provide confirmation that the noise level will not exceed 70 dBa, as measured at the property line [24.09]. [Ord 3-2025 24.04.B.4].
12. A lighting note should be added on sheet C1A 701, referencing the after-hours safety and security lighting requirements. If it can be shown that an elevated security risk exists the Board of Supervisors may approve an increase in after-hours lighting illumination levels [12-2008, 711.D.4.d].
13. The light mounting height is shown as thirty [30] feet on sheet C1A 701. The typical mounting height is twenty [20] feet. The Board of Supervisors may permit a mounting height not to exceed twenty-five [25] feet in commercial/industrial districts meeting certain requirements. If thirty [30] feet is desired a variance will be required. [12-2008, 711.D.4.k].
14. On lighting sheets C1A 703 & 705, the light trespass appears to exceed 0.1 fc at the eastern property line [12-2008, 711.D.4.f]. Review and revise accordingly.
15. Confirm the lighting and landscape have been coordinated. On lighting sheet C1A 701 & 704, there is at least one street tree canopy that overlaps the light pole, other marginal conflicts may exist [12-2008, 711.E.5]. Review and revise accordingly.
16. Signage, if proposed, shall comply with applicable requirements.

SUBDIVISION AND LAND DEVELOPMENT

1. All plan sheets shall not exceed a scale of 1":50' [501.A.2] **Applicant is requesting a waiver of this requirement.**

2. Update Township and County signature blocks to have language matching what is provided in Exhibit 3 Appendix of the SALDO [501.A.4] [501.A.4].
3. Provide a 2"x3" space for the UPI Certification by Cumberland County Tax Assessment Office [501.A.4].
4. Update Professional Certifications to have language matching what is provided in Exhibit 4 Appendix of the SALDO [501.A.7].
5. Provide a list of requested waivers/modifications of requirements with reference to the section[s] of the SALDO that applies [501.A.8]
6. The written and graphical scales shown on sheets C1A 207 & C1A 307 do not appear to be consistent with the plan scale of these sheets. Please reconcile [501.A.10]
7. The written and graphical vertical scales shown on all profile sheets do not appear to be consistent with the actual vertical scale of the profiles. Please reconcile [501.A.10]
8. Sheet C1A 805 is not included on the Sheet Index. Please reconcile [501.A.12].
9. Address the requirement to provide an adequate legend indicating clearly which features are existing and proposed on each plan sheet [501.A.14].
10. Provide a Table of Site Data that contains all information required by this section [501.A.15].
11. Provide a statement indicating that the Applicant shall comply with all Township regulations in effect at the time of the filing of the Preliminary Plan [501.A.16].
12. Provide a note on the plans indicating any deed restrictions or covenants which may be a condition of the sale of the property [501.A.18].
13. Provide all information required by this section in the Zoning Data Table [501.A.22].
14. Prominently label Zoning Districts and Boundaries on the plan [501.A.23].
15. Provide a boundary survey showing the bearings and distances around the perimeter of the parent tract [501.C.24].
16. Identify all vegetated and wooded areas on the plan [501.A.25.g&h]
17. Identify the location of outstanding, rare, threatened, and endangered species and trees on the plan [501.A.25.i]
18. Address the requirement to provide elevations of top of grate, bottom of box, invert in & out of all stormwater inlets & manholes shown on all drawing sheets [501.C.10.c & d]
19. All street profiles shall be drawn at a minimum vertical scale of 1" = 5' [501.C.12]
20. Show all hydrant locations, structure and pipe locations, pipe sizes, slope and type of material, and other related information for the proposed water extension [501.C.13]
21. Show the right-of-way for all of Country Club Road on the plan [501.C.14.b]
22. Provide street right-of-way curve data on the plans [501.C.14.h]
23. Show existing and proposed markings and lane configurations on the plans [501.C.14.j]
24. Show required and provided sight distances and clear sight triangles for all access drives and street intersections [501.C.15]
25. Provide the location of and description of all existing and proposed survey monuments and markers on the plan [501.C.16]
26. Show the size, location, pavement markings, and signage for any fire lanes on the plans [501.C.17]
27. Identify the beneficiary of all existing and proposed easements on the plan [501.C.19]
28. Provide separate drawing sheets appropriately titled for showing existing and proposed easements and their descriptions [501.C.19]
29. Update the Surveyor Certification with language matching Exhibit A4 [503.A.2 & Exhibit A4.A]

30. Update the Design Engineer Certification with language matching Exhibit 4.B [503.A.2 & Exhibit A4.B]
31. Provide certifications for the project Geologist, Landscape Architect and Registered Design Professional matching the language of Exhibit 4.C [503.A.2 & Exhibit A4.C-E]
32. Provide a completed PADEP Sewage Planning Module [503.A.3]
33. Provide a listing of all local, state, federal, and other agency approvals that will be required for Final Plan approval and construction [503.A.8]
34. The Middlesex Township Municipal Authority shall have the responsibility to ensure that all requirements of the Ordinance that pertain to public water and/or sanitary sewerage facilities are complied with [712]. Provide a report from Authority confirming that proposed water and sewer designs meet technical requirements [503.A.9]
35. Proposed private streets are prohibited, unless they meet the design standards of the Ordinance and unless they are set within a private right-of-way meeting the minimum width requirements of the Ordinance [703.A.8]
36. Ensure Intersection Design Standards are met in Table 703.2 including Minimum Length and Maximum Grade of Approaches and Intersection Clear Sight Triangles [Table 703.2]
37. All streets shall be designed and constructed in accordance with the latest edition of PennDOT Publication 408, Specifications and PennDOT Publication 72M, Standards for Roadway Construction [703.D.1]
38. Private parking lots and associated access drives for commercial, institutional, and industrial uses shall be paved in accordance with Section 703.E.1. Clearly show what is and what is not paved for the proposal [703.E.1]
39. Proper stopping sight distance must be provided with respect to horizontal and vertical alignment. Provide stopping sight distances [703.H.4]
40. Ensure the plan complies with Section 703.I for any proposed driveways [703.I]
41. Intersections shall be approached on all sides by a straight leveling area, the grade of which shall not exceed four percent within sixty feet of the intersection of the nearest street right-of-way line [703.J.4]
42. Provide a turning analysis, turning templates or other similar efforts to demonstrate that street and driveway intersections have been properly designed to accommodate larger and/or emergency vehicles [703.J.8]
43. Provide Intersection Sight Distance information and clear sight triangle information [703.K.1,3]
44. Provide vertical curves at all changes in grade and shall be designed in relation to the extent of the grade change and to provide the proper minimum stopping sight distance with respect to vertical alignment. Vertical curve information appear to be missing from the plans [703.L.2]
45. The cross slope or the crown of the streets shall be at least one-quarter inch [1/4"] per foot but not more than three-eighths inch [3/8"] per foot as directed by the Township Engineer [703.L.4]
46. Ensure that the design complies with Section 703.M regarding Designs within Street Right-of-Way [703.M]
47. Easements shall be provided for storm drainage facilities, storm water management areas, Best Management Practice [BMP] areas, sanitary sewer and water facilities, natural features areas, access ways, overhead or underground public or private utilities, and other special purpose easements. All easements must connect to a public street in order to provide access to said easement area [704]
48. Sidewalks must be installed along both sides of all new interior streets in all commercial and industrial land developments within the Township unless otherwise waived by the Township. Sidewalks must also be constructed along the side of all exterior streets upon which the land development fronts [707.A.1]

49. All curbing shall be designed and constructed in accordance with PennDOT Standards and Specifications [708.F]
50. Non-residential developments shall dedicate a minimum of ten percent [10%] of gross land area for park or recreation use [710.A.3.b]
51. All land developments shall be provided with stop signs, street name signs, speed limit signs, and other regulatory and/or advisory signs as may be required by the Township [715.A.1]
52. Any retaining wall greater than four feet [4'] in height and subject to pedestrian traffic in the vicinity of the top of the wall shall be provided with fencing, railing, or other protective measures to the satisfaction of the Township and in accordance with any applicable building codes [716.E]
53. Provide a Preliminary Landscape Plan that contains all requirements set forth in Section 719.B.1.a-h.
54. If/when the project is submitted as a Final Land Development plan, provide a Final Landscape Plan [719.B.2 and 3]
55. Provide a design for street trees that meets 719.C.6.b, e, and f [719.C.6.b,e,f]
56. All trees shall have a minimum trunk diameter of two and one-half inches [2.5"] at a height of six inches [6"] above finished grade [719.C.11 and 719.D.2]
57. Requirements for the measurement, branching, grading, quality, and burlapping of all shrubbery shall follow the code of standards recommended by the American Association of Nurserymen, Inc. in the American Standard Nursery Stock, ANSI Z60, 1-1973, as amended [719.C.13]
58. On Sheet C1A204, PA Data Drive is shown as proposed heavy bituminous pavement while the detail on Sheet C1A801 shows standard asphalt pavement [General]
59. Roadway slope is missing on Sheet C1A510 [General]
60. Proposed roadway contours appear to need reviewed throughout the design [General]
61. The following grading inconsistencies, by means of crossing other contour lines or do not completely connect to an existing contour, require revision [1101]
 - a. C1A 302: Intersection contours; contour tie ins from inlet I-13.1 to Basin R2; contours along Channels 8, 9, 10, 11; contours adjacent to PA Data Dr. from STA 27+50 to 32+50; contours to east of Substation Gran Eastern Access.
 - b. C1A 303: Contours adjacent to PA Data Dr. from STA 32+50 to 35+50; contours adjacent to PA Data Dr. from STA 39+00 to 47+00; contours south of inlet I-8.2, contours near PPL Substation Eastern Drive; contours south of OS-40, contours west of inlet I-3.6 connecting to culvert grading.
 - c. C1A 304: Contours adjacent to PA Data Dr.; contours near the PPL Substation Western Access.
 - d. C1A 305: Contours near PPL Substation Southern Access and PA Data Dr. intersection; contours adjacent to PA Data Dr. from STA 54+00 to 57+50,
 - e. C1A 306: Contours adjacent to PA Data Dr. from STA 00+75 to 4+50; at PA Data Dr. roundabout north and east limits,
 - f. C1A 307: Entrances of Substation Slat Western, Middle, and Eastern accesses, Contours adjacent to PA Data Dr. from STA 58+00 to 63+00
62. There is an unknown spot elevation on Sheet C1A 307 to the North of PA Data Dr. at STA 65-50 [1101].
63. Provide adequate information, such as spot elevations, to ensure that the PA Data Dr. roundabout will carry storm runoff adequately in order to prevent ponding at the center [1102.A.1].
64. Ensure the grading between the landscaping berm and PA Data Dr. on Sheet C1A 306 will not form a channelized discharge to the south end of the roundabout, and surface runoff will be adequately captured [1102.A.2].

65. The proposed grading directs a spillway into PA Data Dr. – Basin V5 (Sheet C1A 306), and another spillway into PPL Substation Southern Access Drive – Basin A1 (Sheet C1A 305) [1102.A.2].
66. It appears that surface water runoff will become concentrated at the eastern end of the landscaping berm on Sheet C1A 307, please reconcile or label this section as a channel [1102.A.3].
67. During grading operations, necessary measures shall be taken to prevent erosion or siltation of natural drainageways and all necessary measures for dust control will be exercised [1102.A.5/6].
68. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surfaces of fills [1103.B].
69. The following toes of fill slopes are closer than twenty-five feet (25') from an adjoining property line. Please reconcile [1103.C]
 - a. Sheet C1A 303: Basin A3 eastern berm,;
 - b. Sheet C1A 305: Grading near culvert along PA Data Dr. STA 48+50, PA Data Dr. STA 54+50 to 57+50,
 - c. Sheet C1A 307: Grading along PA Data Dr. STA 57+50 to 59+50.
70. All fill shall be placed and compacted so as to minimize sliding or erosion of the soil [1103.D].
71. All fill placed adjacent to natural watercourse or constructed channels shall have suitable protection against erosion during periods of flooding [1103.F].
72. If/when the plan advances to final land development plan stage, site grading shall be a financially secured site improvement and shall be included in the construction cost estimate for site improvements required by Article XIII of the SALDO [1104.B].
73. Indicate how the subdivision and land development is designed to cause the least disturbance to natural infiltration and percolation of precipitation to the groundwater table through careful planning of vegetation and land disturbance activities and the placement of streets, buildings, and other impervious surfaces [1202.B.1].
74. Provide an indication of how the proposed stormwater management design considers storm water Best Management Practices (BMPs) in a manner so as to replicate predevelopment hydrology such that it addresses recharge of groundwater. [1202.B.2].
75. Indicate how disturbance to perennial streams including stream riparian buffers, natural drainageways, and drainage swales is avoided [1202.C.1.a].
76. Indicate how disturbance to year-round wetlands and areas with seasonally high water tables is avoided [1202.C.1.b].
77. Provide an evaluation of woodlands per Article V, §502.D.2.b.2 to determine the extent to which woodlands should be partly or entirely conserved. 1202.D].
78. Earth disturbances appear to be shown on slopes exceeding twenty-five percent (25%), which are not in conjunction with a driveway to a single family dwelling [1202.E.1].
79. Earth disturbances appear to be shown on slopes between fifteen and twenty-five percent (15-25%), which are not in conjunction with the siting of a single family dwelling, its access driveway, and an on-lot sewage disposal system [1202.E.2].
80. Provide clearance letters from state and federal agencies for all potential impacts shown on the PNDI and list the avoidance measures on the Land Development Plan [1202.E.2].
81. Indicate how the project will avoid visual or other impacts relative to the Appalachian Trail [1202.G].
82. Protection of trees from Mechanical Injury may be required by the Board of Supervisors [1206.A].
83. No topsoil shall be removed from the site [1206.D.1].

84. Topsoil removed shall be redistributed and stabilized as quickly as possible following the establishment of required grades for a project or project phase. All exposed earth surfaces shall be stabilized by hydro-seeding, or an approved equivalent method, on slopes of less than ten percent (10%) and by sodding or hydro-seeding on slopes exceeding ten percent (10%) [§1206.D.3].
85. Provide a note stating that the "Contractor shall construct all improvements as shown hereon with the current edition, as supplemented and amended, of Pennsylvania Department of Transportation (PennDOT) Publication 408, Specifications, and PennDOT Publication 72M, Standards for Roadway Construction (RC Drawings)," [1401.B].
86. If an item of construction is not covered by those specifications included within the Township's Codified Ordinance, the Applicant shall be required to submit full design information and construction details in accordance with commonly accepted engineering and construction practices for review and consideration by the Township Engineer [1401.C].
87. Prior to construction of storm sewer facilities, specifications and/or details shall be submitted to the Township for review and approval, including but not limited to, pipes, inlets and tops, catch basins, head and end walls, stone bedding, and backfill material, as applicable [1406.A.6].
88. The Township Engineer shall be present, unless indicated otherwise, during construction of stormwater Best Management Practices (BMPs), to perform material checks and to observe for proper construction. Prior to construction, specifications and/or details shall be submitted to the Township for review and approval [1407.B/C].
89. In the event that changes to approved plans are required prior to or during the construction phase of the work due to unforeseen field conditions, final utility design, or other similar changes or conflicts encountered during construction, the Township shall be notified immediately so that the proposed changes can be reviewed prior to implementation. Any design changes made without review and approval by the Township shall be considered defective work and shall be subject to removal and reconstruction [1408.A].

ENVIRONMENTAL IMPACT ASSESSMENT (SUBSECTIONS OF SALDO)

1. HRG understands that the submitted Environmental Impact Assessment is intended to address the entire data center development, and is not limited to Phase 1A. The comments that follow have been prepared accordingly. If this is not the case, please advise.
2. The Geologic map lacks site-specific detail. Provide descriptions and boundaries for the actual rock formations, along with folds, faults, fractures, and any sinkholes or closed depressions, etc. Provide the specific geologic rock formation boundaries and names based on published geological mapping, and the geologic and engineering characteristics of each formation. [718.D.4.A]
3. Provide a Geological Plan at a scale of no more than one inch to one-hundred feet (1" = 100'). (Note the provided plan scale is 1" = 500') [§718.D.4.a].
4. On the Soils Map, include information on the flood hazard potential relative to each soil type. [718.D.4.B]
5. Provide the documented prior environmental experience for each preparer [718.C].
6. Provide the hydrogeological studies discussed under §718.D.0 on page 16 of the EAI [718.D].
7. Indicate the photo view directions (Northeast, Southwest, etc.) for each photo [718.D.2].
8. Provide additional photos of the Conodoguinet Creek riparian corridor and major wetland areas [718.D.2].
9. Provide a Site Development Plan at a scale of not more than one inch to one-hundred feet (1" = 100') [718.D.3.a].

10. In the Submission Matrix on page 6 of the EIA, correct the section reference to 718.D.3.b.
11. Provide plans and elevations depicting the proposed size, square footage, height, number of rooms (where applicable) of building and/or other structures [718.D.3.b].
12. Provide a statement indicating the existing and proposed ownership of the tract, and where applicable, the type of ownership, operation, and maintenance proposed for areas devoted to Open Space or otherwise not under control of a signal lot owner [718.D.3.c].
13. Indicate how the project's water and sewer requirements will be met [§718.D.3.d].
14. Call out the phases within the boundaries shown on the plan [718.D.3.e].
15. Identify any lineaments, fracture traces, caves, and karst related sinkholes any closed depressions on the Geological Plan [§718.D.4.a].
16. Provide a discussion on the susceptibility to karst features, sinkholes, and solution openings on the Geological Plan [718.D.4.a].
17. Provide a reference to the source of the information provided on the Geological Plan [718.D.4.a].
18. Provide a Topographical Plan at a scale of no more than one inch to one-hundred feet (1" = 100'). (Note the provided plan scale is 1" = 500') [718.D.4.b].
19. Provide the source of the information provided on the Topographical Plan [718.D.4.b].
20. Provide Soil Plan at a scale of no more than one inch to one-hundred feet (1" = 100'). (Note the provided plan scale is 1" = 500') [718.D.4.c]
21. Provide a reference to the source of the information provided. The Minimum Depths to Bedrock and the Minimum Water Table Depths provided are not equal to the values listed in the USDA Web Soil Survey interactive database [§718.D.4.c].
22. Provided information regarding whether or not the various soil types are rated as hydric. [718.D.4.c]
23. Provide the Hydrogeological Plan and Wetlands Exhibit at a scale of no more than one inch to one-hundred feet (1" = 100'). (Note the provided plan scales are 1" = 500'.) [718.D.4.d]
24. Provide a reference to the source of the information provided [718.D.4.d].
25. Provide a key or a legend explaining in more detail the characteristics of the various wetland designations that are depicted on the Wetlands Exhibit Overall plan [718.D.4.d].
26. While the Hydrological Plan indicates areas of high and low aquifer recharge potential, there is not enough detail regarding the quantity of groundwater recharge available to the area and ultimately to the Conodoguinet Creek under natural, undeveloped conditions. Provide an aquifer recharge volume calculation for the entire property area based on published average annual recharge values to adequately address the hydrological characteristics of the tract. [718.D.4.d]
27. The Hydrologic Plan does not show enough detail. Provide a more visible basemap and topographic contour lines to the Hydrologic Plan to provide more detail regarding aquifer recharge potential that is based on topography and soil types [718.D.4.d].
28. Discuss the project's water needs and the proposed source of water for the data center within the Hydrologic Plan. [718.D.4.d]
29. Discuss the how permitting requirements with PA DEP and the Susquehanna River Basin Commission (SRBC) will be addressed within the Hydrologic Plan [718.D.4.d]
30. The PNDI included in the EIA is dated 6/12/2024, however, the PNDI system was updated in July 2025. Provide an updated PNDI. [718.D.5]
31. Note the DCNR avoidance measure and recommended best practices for the threatened and endangered plant species (on page 173) on the Phase 1A Land Development Plan [718.D.5].

32. Provide a copy of the Bald Eagle Project Screening Form included in EIA as well as any USFWS correspondence regarding the potential impact to Bald Eagles on the PNDI. Page 57 notes there is no evidence of active use during recent surveys [718.D.5].
33. Note the avoidance measures listed on pages 72 and 73 on the Phase 1A Land Development Plan [718.D.5].
34. Correct the multiple Land Use Map display issues on page 190, which make it unclear what the map is trying to depict [718.D.6.c].
35. The EIA notes that surveys/coordination with the PHMC are ongoing and that a reconnaissance-level historic architecture survey was conducted by SWCA Environmental Consultants, and that the final report will be forthcoming. Provide a clearance letter, report, and any other correspondence with the PHMC [718.D.7].
36. The information under the "Full Build-Out" section on page 209 indicates 250 FTE staff at full build-out, while the information provided under the "Employment and Economic Activity" section on page 211 indicates 225 permanent positions will be created. Clarify why the numbers do not match or bring the numbers into agreement [718.D.12 and 718.D.13].
37. Under the first heading, "Economic and Fiscal Characteristics" on page 211, the allocated annual property tax revenue for the project to Middlesex Township is listed as "\$10.1 million". Under the second heading on the same page "Comparative Fiscal Impact", the "Net Township Impact" from the Data Center is listed as "\$8.8M". The \$10.1 million and "\$8.8M" figures seem to reference the same topic, but are different values. Please provide clarification on what the numbers represent and/or if they should be equal [718.D.13].
38. The table headings under the "Comparative Fiscal Impact" section on page 211 are very closely aligned, making it difficult to read what each column includes [718.D.13].
39. The Environmental Safety / Environmental Characteristics and Conditions Assessment focuses predominantly on environmental safety. Provide additional information to address the Environmental Characteristics and Conditions of the site. [718.D.14]
40. Expand on the existing characteristics and conditions for water quality in the Environmental Safety / Environmental Characteristics and Conditions Assessment. Provide results of actual water sampling and analysis or a similar means of characterizing water quality [718.D.14].
41. Provide additional construction-related information regarding noise and vibration in the Environmental Safety / Environmental Characteristics and Conditions Assessment, such as what the blasting noise level will be in decibels, and a survey of private wells and structures existing within the applicable radius of blasting. Wells in carbonate aquifers can be particularly susceptible to impacts from blasting [718.D.14].
42. The Future/Operational conditions section of the Environmental Safety / Environmental Characteristics and Conditions Assessment states that an engineered stormwater management system will ensure no degradation. Provide more detail on how much stormwater is expected, how the stormwater management system will be designed to adequately handle stormwater [718.D.14].
43. The ordinance states that "the Applicant must demonstrate and specify in the EIA Report how and where the findings in the EIA Report and its attachments are reflected in the Subdivision Plan and/or Land Development Plan". The Project Bolt Masterplan is referenced the Effects of Development / Environmental Implications Assessment, but individual plans are not referenced. [718.D.15]
44. The EIA did not provide the implications of the land development on the resources, conditions, and characteristics described in all Subsections (4) through (14). Fully describe the conditions and characteristics in these sections so that the land development implications for these items can be predicted and assessed [718.D.15].
45. Provide more information about how the southeastern portions of the site will be recessed into the hillside and thereby limit visibility of the building. Indicate whether the hillside will be excavated or

blasted in order to construct the building, and address slope stability. Line of sight profiles may be required to demonstrate the impact on visual resources [718.D.8].

46. The environmental implications assessment of the water and sewer utilities are essential for evaluating this land development. However, the applicant has indicated that the water and sewer needs for the data center's campus are still being evaluated. They also indicate that the demands for water, sewer, communications, and electricity will be met through existing regional infrastructure. Additional, quantitative information addressing the water supply should be provided. [§718.D.15].
47. In addition to addressing implications of the proposed data center for the area surrounding the data center's property tract, provide a discussion to address these impacts for the subject property tract [718.D.15].
48. Provide a discussion on the generation and emissions of steam from HVAC units after the data center is in operation, as well as the cooling system design and operations for the facility, which are important for determining the facility's water demand [§718.D.15].
49. Provide a discussion on the environmental implications of the stormwater basins being engineered for evapotranspiration rather than providing aquifer recharge, and ultimately, recharge to Conodoguinet Creek [718.D.15].
50. The applicant has provided and supported alternatives to the proposed data center with the exception of the water sources for the project development phases beyond the initial Phase 1A. Provide a discussion on the water sources for the entire data center project, which should be substantially planned in the initial planning phases of this development project, as adequate water availability is critical for development of the complete facility [718.D.16].
51. Expand on the stormwater management discussion to include additional and specific details on the stormwater management alternatives that address the positive and negative aspects of other stormwater management designs [718.D.16].
52. Provide a discussion on the adverse impacts to aquifer recharge volume and recharge to Conodoguinet Creek, as well as secondary impacts to flora and fauna resulting from the recharge impacts [718.D.17].
53. Provide a discussion on the adverse effects from additional light sources [718.D.17].
54. Expand on the discussion on environmental and ecological adverse impacts in more detail, such as what specific types of plants and animals will be impacted [§718.D.17].
55. Provide a discussion on the mitigation of reduced groundwater recharge and recharge to Conodoguinet Creek [718.D.18].
56. Provide the calculated average volume of groundwater recharge reduction in "Environmental Changes" section [718.D.19].

STORMWATER MANAGEMENT

1. Provide a legend on all sheets or a combined legend on the notes sheet for all symbols and hatchings on the plan [General]
2. The existing conditions plan only depicts one sheet shown at a scale of 1" =150'. SWM Ordinance does not allow a scale smaller than 1"=100' and needs to be clear and legible. Existing conditions features, especially along Country Club Road and the existing gravel area are difficult to follow [302].
3. Provide existing conditions ground cover map delineated by shading, hatching, color coding, etc. which includes percentage of existing cover on the map [302.A.4].
4. Provide proposed conditions ground cover map delineated by shading, hatching, color coding, etc. which includes percentage of proposed cover on the map [302.A.9].

5. Clarify the extent of impervious coverage within the substations and clarify what the cover will be (ie: gravel, concrete, or asphalt) [302.A.19].
6. Provide soil boundaries and their HSG on the SWM Plan [302.A.7]
7. Provide the limit of disturbance on the Grading Plan and label the acres and square feet [302.A.18]
8. Provide an Erosion and Sediment Control Plan [302.E].
9. Provide a Stormwater Soils and infiltration investigation report. Infiltration testing results and test pit exhibit were provided, however no report, methodology, soil profiles, photos, etc. were provided [303.B.2 & 303.H.9].
10. Provide a written section within the PCSM Report to support why the use of ET was selected and how the infiltration testing and geotechnical results prohibit traditional infiltration practices [303.A.2 & 303.B.2].
11. Provide proof of NPDES and PADEP permit and any other required regulatory permit submission. Provide copy of submitted documents for reference [103.J & 301.Q]
12. Provide a drainage easement with metes and bounds along the existing watercourses. Alternatively, the drainage easement may follow the same lines as the 50' Township riparian buffer [301.P].
13. Provide a min. 20' wide drainage easement with metes and bounds along all stormwater management facilities, channels and inlets [303.J.12 & 303.K.12].
14. Storm structures shall be placed such that no more than three hundred (300) feet of storm pipe is proposed without a structure for access. Storm Inlet I-38.1 to FES-38 contains 404' feet of pipe. Reside accordingly [303.K.7].
15. Provide a note on the plan which states "At the time of application for a building permit for any approved lot created by a subdivision and/or improved as a land development project, issuance of the permit shall be conditions upon compliance with the terms of the Stormwater Management Ordinance" [301.T].
16. Provide a note on the plan which states "Any field changes to the approved Stormwater Management Plan design must be addressed by the project design engineer and then submitted to the Township Engineer for review and approval" [301.T].
17. Provide a watershed location map on the Plans or within the Stormwater Management Report [302.A.2].
18. Ensure all proposed contour lines tie into existing contour lines and all proposed contours are shown. For example, the proposed contours lines at the western and northern access do not appear to be complete. [302.A.18].
19. Provide the operation and maintenance (O&M) plan on the Land Development Plans. The O&M plan should clearly explain who is responsible, how the proposed facilities operate, how they shall be maintained and any other items as listed in 501.C of the Stormwater Management Ordinance [302.F & 501.C].
20. The O&M Plan should contain a note, in a form satisfactory to the Township Solicitor, designating the entity responsible for operation and maintenance of the stormwater management facilities consistent with the approved O&M Plan, and in the event that the responsible person or entity fails to do so, granting to Middlesex Township the right but not the duty to enter upon the premises to repair or restore said facilities, to charge and assess the costs thereof to the owner, and to enforce said charges and assessments by lien upon the property [501.B.1.a].
21. If/when the project advances to a Final Land Development plan, the deed of each lot shall contain a covenant binding the grantee and all successors title and interest designating the responsibility for operation and maintenance of the stormwater management facilities. Reference to this covenant shall be noted on the cover of the Plans [501.B.1.a].

22. If/when the project advances to a Final Land Development plan, provide a signed and executed O&M agreement. The O&M agreement shall be recorded within fifteen (15) days of approval of the O&M Plan by the Middlesex Township [502].
23. Provide protection from excess compaction around the proposed stormwater management facilities to promote the possibility of infiltration as much as feasible [303.H.20].
24. The minimum side slopes for all swales is 4:1. Revise accordingly [303.H.24.e].
25. The minimum bottom width of a swale is 2'. Revise Channel 7 accordingly [303.H.24.d].
26. Indicate the seed mix to be utilized in the vegetated channels [303.H.24.h].
27. Provide a note on the plan which states "The property owners shall not obstruct or alter the flow, location, or carrying capacity of a stream, channel, or drainage swale to the detriment of any other property owner, whether upstream or downstream" [303.K.13].
28. Polychlorinated Biphenyls (PCBs) are a known contaminant from substations. The discussion of the potential for PBC contamination and how they are mitigated should be included either in the EIA or the PCSM Report. [303.K.14].
29. Provide a note on the plan which states that an As-Built plan shall be submitted to the Township in accordance with Section 406 of the Middlesex Township Stormwater Management Ordinance [406].
30. There appear to be two culverts which convey existing channel 06 and a section of USACE jurisdictional wetlands under proposed PA Data Drive. The proposed culverts need to have separate profiles on the plans, and calculations provided for the sizing of the culverts. Confirm that sufficient cover is provided between the wetland culvert and the storm sewer system in the roadway. Additionally, a note should be called out at each crossing identifying that a PADEP permit is necessary. Once the permits are received the callouts should be revised to reference the permit number [301.Q & 302.A.12].
31. Provide the longitudinal slope of each swale on the Plans [302.A.12].
32. Clarify how the emergency spillway for Basin A1 will function as the PPL substation access drive [303.J.8.a].
33. Confirm which emergency spillway lining for Basin A2 is correct as the Plans show Shoremax w/ C350 and the calculations utilize SC250 [303.J.8.c].
34. It is recommended that all inlets provide a minimum 2" drop between the lowest inlet pipe invert elevation and the outlet pipe invert elevation [1401.B].
35. It is recommended that for inlets containing a change in pipe size, the elevation for the crown of the pipes shall be the same or the smaller pipe's crown shall be at a higher elevation [1401.B].
36. Provide utility crossings (waterline) on all storm profiles where applicable [302.A.12].
37. The Roadway Profiles need to label the storm sewer cross pipes with size, slope, and material. Alternatively, the storm sewer cross pipes can be shown on a separate profile [302.A.12].
38. Provide storm profiles for the following storm sewer runs [302.A.12]:
 - a. EW-10.4 to FES-10. Ensure the retaining wall is depicted on the profile.
 - b. EW-12.2 to EW-12.1
 - c. OS-29 to FES-29
 - d. OS-28 to FES-28
 - e. OS-30 to FES-30
 - f. I-11.1 to MH-10.2
 - g. Profiles for the two culverts
39. Structure I-14.2 on Alignment 14 Profile is missing a profile labels [302.A.12].

40. Depict the riprap apron on the Plan View for [302.A.12]:
 - a. EW-20.1
 - b. EW-19.1
 - c. EW-22.1
 - d. FES Basin A3
41. Ensure the profiles show the entirety of the proposed grade. See Alignment 7 Profile and Alignment 15 Profile for example [302.A.12].
42. The Alignment 14 Profile, Alignment 15 Profile, Alignment 19 Profile, and alignment 20 Profile show that proposed endwalls are located below the proposed grade. Revise the profile and grading accordingly [302.A.12].
43. I-32.4 is located above the finished grade of the swale. Additionally, there does not appear to be sufficient vertical cover over the 24" SLCPP. Revise accordingly [302.A.12].
44. The Alignment 22 Profile depicts the Entrance No. 2 culvert to be located above grade. Revise the plan accordingly to provide sufficient cover above the 15" SLCPP driveway cross pipe [302.A.12].
45. Ensure there are no negative slopes depicted on the storm profiles. Example can be found on Alignment 15 Profile [302.A.12].
46. Label the culvert endwall (or retaining wall) and invert into the endwall on Alignment 40 Profile [302.A.12].
47. I-31.6 is located in the center of the PPL Substation Eastern Access Drive. Confirm that this is the intent or revise accordingly [General].
48. Clarify the purpose for leaving the existing access drive to the west of Entrance No. 1 in place and why the proposed storm pipe is placed below grade at a 0% slope [General].
49. Specify on the storm profiles where a non-standard inlet box is required. For example, Inlet I-13.2 is not constructable utilizing a standard box. Provide a construction detail and labeling for any type of box utilized [302.A.13].
50. The PADEP PCSM spreadsheet utilized 3 feet of amended soils within ET Basin A3 and C1, 3.5 feet within Basin R2, and 5 feet within Basin V5. However the ET Basin Detail specifies 2 feet for all basins. Please reconcile [302.D].
51. Provide locations of soil test pits, soil profiles, and infiltration tests on either the "Phase 1A Overall Stormwater and Grading Plan" and/or the PCSM Report/Stormwater Soils and Infiltration Investigation Report. This documentation should demonstrate compliance with section 303.H.12, including, but not limited to, the number of infiltration test pits and soil profiles located at the bottom elevation of each proposed BMP/SCM.
52. The proposed design utilizes non-infiltration BMPs/SCMs in a non-karst area. Please provide documentation in the PCSM Report and Appendices that the standard set forth in 303.G.1.b is satisfied for all areas where infiltration is proposed. This volume may include the volume used to satisfy state requirements [303.H.2].
53. Provide a separate stormwater site assessment in accordance with Chapter 4 of the PA BMP Manual or clarify how the submitted Environmental Impact Assessment (EIA) provides sufficient information regarding how the location of the stormwater management facilities were placed to maximize the potential for groundwater recharge [302].
54. The following deficiencies were noted in the O&M plan contained in the PCSM report. Note deficiencies shall be corrected in the O&M plan in the PCSM report and in the copy of the plan added to the Land Development record plans.

- a. Adjust dewatering time for Infiltration Basin, Evapotranspiration Basin, and Vegetated Channel to 48 hrs [303.H.17]
 - b. Include the requirement to submit report summarizing findings of inspections to Middlesex Township within thirty (30) days of inspection for Infiltration Basin and Evapotranspiration Basin BMPs [501.D]
 - c. Define inspection and reporting frequency for Vegetated Channel and vegetated Landscape areas if they are credited water quality BMPs/SCMs [501.D]
 - d. Quantify mowing frequency for all BMPs/SCMs based on specified plantings. (example native seed mixtures shall be mowed annually between November and March) [501.C.2 and 501.C.4]
 - e. Clarify reference to emergency dewatering pipe in O&M plan for infiltration basins, outlet structure details do not indicate the presence of emergency dewatering devices. [501.C.3]
 - f. Clarify which O&M section applies to each BMP/SCM utilizing naming conventions similar to labels on record plan or supplemental O&M exhibit. [501.C.3]
 - g. Clarify which inlets boxes the O&M described in the ET Basin O&M applies to [501.C.3]
 - h. Add language to O&M section for all ET and Infiltration Basins to indicated O&M of all pretreatment devices as applicable [501.C.3]
55. In BMPs/SCMs where either amended soils are to be placed or infiltration is anticipated to occur add water quality pretreatment (forebays or other applicable methods) at points where concentrated discharges enter the basin. [303.H.7]
56. All basins are labelled as wet ponds/retention basins in the PaDEP spreadsheets. Details for the basins have a lowest orifice above the amended soil level. The SWM Ordinance defines Retention/ Wet Ponds as an impoundment designed to maintain a permanent pool of water standing longer than 48 hrs. Retention basins/wet ponds are prohibited in the Township. [303.I]
57. Provide documentation that all infiltration practices or alternative volume mitigation measures such as evapotranspiration move all surface ponding sub surface within 48 hours. [303.H.17].
58. Provide identification of any additional Water Quality BMPs/SCMs on site. O&M plan references additional SCMs not labeled on plans or in PaDEP calculations. [302.A.12]
59. Basin A2 appears to be constructed in fill adjacent to the proposed site. Additionally, grading appears to show the berm at an atypical slope when compared to other basins. Please provide additional information cross sections/details, specifications, and geotechnical engineering support to clarify the design/stability of this basin and the adjacent site. Design should be in accordance with PaDEP BMP Manual 06. [General]
60. Provide the following Clarifications related to Tc Calculations
- a. Provide indications of where flow path segments transition on Pre and Post DA maps (303.D.1)
 - b. Provide Proposed Tc support calculations for POA B [303.D.1]
61. The identified areas analyzed for peak rate in the existing condition (243.78 acres) and the proposed condition (220.66 acres) do not align. These numbers are noted both on the plans and in the PCSM report consistently. Please revise or explain [303.D.1]
62. Please Clarify the routing diagram in POA. Basin 1A drains to un-detained and DP1 but on plans drains to DP1 and DP2. [303.D.1]
63. POI V under the volume management tab indicates 41.32 acres is tributary to the two basins but support documents to basin subareas 36.9 acres. Please clarify inconsistency. [303.G]
64. Provided volume calculations indicate 166.48 acres of Disturbed area between all POIs in the disturbed condition and 125.43 acres between all POIs in the existing condition. Please clarify and provide a landcover and drainage area map supporting volume calculations. [303.G]

65. Provide Spillway Calculations to demonstrate stability for temporary basin in POI V. (303.G)

TRAFFIC

1. Demonstrate that the Traffic Impact Studies has been approved by the Township's traffic consultant [717]
2. Provide a statement indicating that the Applicant will be responsible for paying for the installation of all street and traffic control signs and devices required for the project as deemed necessary by Middlesex Township [501.A.17].

This review is based solely on the documents referenced above and does not relieve the design professional of any responsibility, nor does it imply any design responsibility by Herbert, Rowland & Grubic, Inc. HRG reserves the right to make additional comments in the future based on newly-supplied or revised information as provided by the applicant or their representative[s].

Sincerely,

Herbert, Rowland & Grubic, Inc.

A handwritten signature in blue ink, appearing to read "J. Michael Hess".

J. Michael Hess, PE
Team Leader

JMH

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