Twp. 610-356-4040

TOWNSHIP OF MARPLE

Fax 610-356-8751

Board of Commissioners

Joseph A. Rufo, President
Daniel D. Leefson, Vice President
Jan G. Ceton
Robert Fortebuono
John J. Lucas
John R. Longacre, II
Michael K. Molinaro

Anthony T. Hamaday
Township Manager

Sharon L. Angelaccio
Township Secretary

J. Adam Matlawski, Esq.
Township Solicitor

227 South Sproul Road
Broomall, PA 19008-2397
www.marpletwp.com

John P. Capuzzi, Jr.
Treasurer

Kathleen M. Yanoshak
Controller

Edward E. O'Lone, CPA
Director of Finance

Joseph C. Romano
Director of Code Enforcement

William Creighton
Director of Public Works

Joseph A. Mastronardo, P.E.
Township Engineer

Thomas J. Murray
Superintendent of Police

July 31, 2015

MRPL 0132

Anthony Hamaday, Township Manager
Marple Township
227 S. Sproul Road
Broomall, PA 19008

RE: Preliminary Land Development Plan
Cardinal Crossing Towne Center – S. Sproul Road

Dear Mr. Hamaday:

As requested, we have reviewed the following documents prepared, unless otherwise noted, by Bohler Engineering in connection with the referenced project:

- *"Proposed 'Cardinal Crossing Towne Center' Commercial & Residential Development Preliminary Subdivision and Land Development Plans"* (47 sheets), dated May 15, 2015.
- *"General Project Description and Stormwater Management Calculations,"* dated May 15, 2015.
- *"Cardinal Crossing Goodman Properties Manual of Written and Graphic Design Guidelines,"* prepared by Glackin Thomas Panzak, dated May 15, 2015.
- *"Cardinal Crossings Transportation Impact Study,"* prepared by Traffic Planning and Design, Inc. (TPD), last revised May 15, 2015.

Additional items submitted but not reviewed:

- *"Site Context & Market Overview – Cardinal Crossing,"* prepared by Glackin Thomas Panzak, dated May 18, 2015.
- *"Fiscal Impact Analysis – Cardinal Crossing,"* prepared by Glackin Thomas Panzak, dated May 18, 2015.

The applicant, Cardinal Crossing Realty Associates, LP, proposes to develop a 213 acre site bounded by Sproul Road, Reed Road, Interstate Route I-476, and the Cardinal O'Hara property (folio no. 25-00-01275-00). The property is currently split by three zoning districts: INS – Institutional, RC – Residential, and RB - Residential. The applicant is proposing zoning amendments to replace the existing zoning for the tract and establish a Planned Community Center (PCC) District instituting requirements for commercial development and a Planned Community Residential (PCR) District providing residential development standards. The Preliminary Plan contemplates a mixed-use development consistent with the proposed zoning amendments; which, would permit construction of a 303 multi-family dwelling unit residential development; and, a commercial development campus consisting of 746,650 square feet of retail space (including a fuel island), a 100,000-square-foot medical office building, an 80,000-square-foot fitness center, a 65,000-square-foot hotel, and a 5,585-square-foot convenience store with a fuel island.

With the exception of the existing Don Guanella facility, the property is predominantly woodlands. Branches of Whetstone Run, a tributary to Darby Creek, traverse the property; a FEMA established floodplain is attributed to Whetstone Run along Reed Road. The existing Don Guanella buildings are served by public water and sewer and the applicant is anticipating public services for the proposed development.

We offer the following comments:

ZONING

The following review was completed with the assumption that the proposed amendments to the Marple Township Zoning Ordinance for the Planned Community Center District (PCC) and Planned Community Residential District (PCR) are adopted as drafted. Further review and additional comments may be necessary, should the proposed amendments be modified.

1. The development standards, consistent with the proposed Zoning Ordinance amendments should be listed on the plan:
    a. The minimum setback from the edge of the cartway of any road for all multi-family dwellings is 15 feet, however the plan states 10 feet. (§300-33A.G(2))
    b. The single-family detached development requirements shall be added to the Zoning Table. (§300-33A.G(3))
    c. The height of the proposed buildings shall be provided. (§300-33A.Q(2)(d)) The Manual of Written and Graphic Design Guidelines provides building renderings but does not provide dimensional information.
    d. Required off-street parking setbacks shall be added to the zoning table. (§300-76)

2. Driveway 'J' and other site improvements are proposed on the newly established Don Guanella Village (DGV) Mini Campus property. Zoning details for the DGV property are to be provided to confirm that the proposed improvements are consistent with the required development standards for the zoning district.

3. The applicant should indicate proposed private roads and rights-of-way for new or improved roadways offered for dedication to the Township. (§300-33A.Q(3)(d)) Should

internal roads that extend onto adjacent properties be held in private ownership, cross-easements will be required establishing ownership and maintenance responsibilities.

4. Covenants, grants of easement or other restrictions existing or to be imposed shall be provided in accordance with §300-33A.Q(2)(g).

5. Required parking calculations shall be provided for the PCR district. (§300-33A.Q(2)(h)).

6. In accordance with the requirement to preserve and incorporate natural features into the proposed landscaping for the development (§300-33A.F(3)), the following comments are to be addressed:
   a. The entirety of the open space proposed for dedication (green space) is located within the residential portion of the development. Green space is not preserved within the commercial district. The plan should provide for community parks or plazas that are readily accessible to the public within the residential district and preserve green space and riparian corridors within the commercial district equivalent to a minimum of 25% of each tract. (§300-37A.A(4)(e))
   b. The existing streams are separated from the development by high retaining walls and are limited in access; suitable access and a connection that limits the use of retaining walls should be established between the development and the open space areas.
   c. A wetland study is to be provided to confirm preservation of salient natural features.
   d. Open space shall be free of structures that are not complementary to public recreation and use. (§300-14) At least five (5) stormwater basins are proposed within or abutting the open space area.
   e. The ownership and manner of maintenance of the common open space shall be provided. (§300-33A.Q(2)(c))
   f. The proposed open space is to be identified on a plan with a scale not greater than 1 inch equals 100 feet. (§300-33A.Q(3)(c))

7. Although the proposed PCR ordinance requires a minimum 10-foot setback between parking lots containing 10 parking spaces and any dwelling structure (§300-33A.G(5)); the proposed plan contains multiple parking lots containing up to 9 spaces close to residential structures. The parking setback requirement should be revised.

8. If the applicant proposes to phase the development, a phasing plan shall be provided. (§300-33A.M)

9. The applicant must provide a plan for providing sanitary sewer and domestic water service to the development that is satisfactory to the Board of Commissioners, Pennsylvania Department of Environmental Protection (DEP), and appropriate municipal authorities or utility companies. At a minimum this submission shall include a plan illustrating connection to public utilities, accompanied by documentation as to the impact of the proposed development on the public utilities. (§300-33A.O; 33A.Q(2)(e); 33A.Q(3)(f); 37A.B)

The existing Don Guanella Village is served by public sewer via the Radnor-Haverford-Marple Sewer Authority (RHM) and Springfield Township. Connection to RHM and Springfield Township is limited in accordance with DEP's Corrective Action Plan for the Darby Creek Outfall sewer. The applicant should schedule a meeting with DEP, RHM and Springfield Township to develop reasonable alternatives to establish public sewer collection and treatment for the anticipated sewage flow from the development.

10. The proposed ordinance specifies that "pedestrian accommodations shall be included on the development tract in locations logical to provide pedestrian movement between buildings, between buildings and parking areas and between buildings and parking areas and green spaces." (§300-39A.A(3)) Proposed pedestrian accommodations on the site are limited due to the expansive parking areas separating buildings; the remote location of the hotel, fitness center and medical office campus; and, limited connection to the green space walking trail.

11. Signs shall not be installed in a sight triangle. (§300-37A.A(8)(a)(1)(c); 37A.A(8)(a)(4)(d)) Provide sight triangles for all intersections with proposed signs.

12. Loading and unloading areas that do not obstruct or interfere with public rights-of-way or any parking spaces and are screened from view shall be indicated on the plan. (§300-86)

SUBDIVISION AND LAND DEVELOPMENT

13. The following items should be provided per the Preliminary Plan requirements:
    a. Datum to which contour elevations refer (§265-9.B(8))
    b. All existing buildings, sanitary and storm sewers, water mains, culverts, petroleum or petroleum products' lines, fire hydrants, gas mains, telephone conduits and other significant man-made features on and adjacent to the tract. (§265-9.B(10))
    c. The existing right-of-way and cartway width of all roads on and adjacent to the property. (§265-9.B(11))
    d. Location and width of all proposed streets, alleys, rights-of-way and easements; proposed lot lines with approximate dimensions; proposed minimum building setback lines for each street; playgrounds, public buildings, public areas and parcels of land proposed to be dedicated or reserved for public use (§265-9(13))
    e. Name of all abutting property owners within 500-feet. (§265-9(14), §265-5.B)
    f. All existing and proposed zoning boundaries that traverse or are within 300 feet of the area covered by the plan. (§265-9(17))
    g. The proposed size and location of sanitary sewers, storm sewers, water mains, stormwater management structures and erosion and sedimentation control, along with sufficient engineering design and calculations to satisfactorily demonstrate to the Township Engineer the feasibility of the proposed construction. (§265-9.B(19))

14. The Subdivision Plan is to be consistent with the property boundaries recently established for the Don Guanella Village Mini Campus per the approved Final Subdivision Plan,

prepared by Catania Engineering Associates, Inc, dated February 16, 2015 and last revised May 7, 2015. (§265-9(12))

15. The minimum allowable cartway width for a minor road is 27-feet within a 50-foot right-of-way and the cartway width for a collector road is 36-feet within a 60-foot right-of-way. (§265-25(A)) Additional right-of-way and cartway widths may be required by the Board of Commissioners to promote public safety and convenience or provide parking space in commercial districts and in areas of high-density residential development. (§265-25(C)) Additional information is necessary to define the area of Reed Road right-of-way to be vacated; new right-of-way to be dedicated; and, the established property due to the re-allocation of right-of-way areas.

16. Regarding open space:
    a. Recreational areas and open space are to be located in a manner to best serve the public utilizing existing topographical features. (§265-19(A)) Access to open spaces is restricted due to the proposed site topography and retaining walls.
    b. The applicant shall indicate ownership and maintenance responsibilities for the open space and recreational areas. (§265-19(B))
    c. The proposed property is two parcels divided for the residential and commercial develompents; however, open space is only provided within the residential parcel. Open space should be reserved and/or dedicated for both parcels.
    d. Stormwater management facilities should not be included in the calculation for open space, since usage of those areas for active or passive recreational purposes are limited.

17. Pedestrian interior walks may be required where necessary to assist circulation or provide access to community facilities. Such crosswalks shall have a width of not less than 10 feet and a paved walk of not less than 4 feet. (§265-30(D))

18. Driveways shall be located not less than 40 feet from intersections. (§265-30(D))

19. A lighting intensity plan is required for the street lights, parking areas, pedestrian/public walkways and trails. (§300-11; §170-29.B).

TRANSPORTATION IMPACT

20. Regarding the previously proposed site access to Reed Road in the area of Marpit Drive, the study should provide information regarding the impact of this connection if it were to be constructed, and whether conditions at other study area intersections would improve. In addition, documentation to support the applicant's statement that the access is infeasible should be provided to the Township.

21. The revised Traffic Impact Study shows unmitigated impacts associated with the development traffic at the Sproul Road and State Road intersections with Springfield Road. Additional analysis should be conducted to investigate feasible mitigation measures. If

adequate improvements cannot be identified, the applicant can consider: reducing the size and/or intensity of the development, investigating other connections to the limited access highway system (I-476), and/or establishing an alternate transportation plan, acceptable to PennDOT and the Township. The proposed improvements at the intersection of Sproul Road and Old Marple Road are required to mitigate the impact of the development traffic and do not appear to contribute to the mitigation required at the intersection of State and Springfield Roads, as indicated in the May 15, 2015 letter from TPD.

22. The configuration of the intersection of Sproul Road and Springfield Road should be revised within the Synchro models to more closely reflect the proposed geometry. Please revise all Synchro files with the correct lane configuration at this intersection and update the LOS/delay results for all scenarios.

23. As previously noted, due to deficiencies indicated at major intersections along the State Road and Sproul Road corridors, the study scope should be expanded to include the evaluation of impacts to potential alternative routes to access the project site, specifically Reed Road via Burmont-Eagle Road in Haverford Township and Reed Road via West Rolling-Eagle Road in Springfield Township. The recent study has revised the trip distribution to these routes, but has not evaluated the impacts to the key intersections such as Burmont Road & Glendale Road and Eagle Road & West Rolling Road.

24. Based on the 95th percentile queue analysis results, the queue length exceeds the existing/proposed storage and/or extends into adjacent intersections with the proposed development's site traffic. The report should be revised to investigate feasible mitigation measures of the proposed site development for the following locations:
    a. Sproul Road & Lawrence Road
    b. Sproul Road & Crum Creek Road/Realigned Reed Road
    c. Sproul Road & Springfield Road
    d. Sproul Road & State Road
    e. Springfield Road & S. Cemetery Driveway

25. The traffic signal phasing is not consistent between the peak hours at the intersection of Sproul Road and State Road; for example, the southbound left-turn phase is a "lead" phase during the AM peak hour and a "lag" phase during the PM peak hour for the 2025 Build with proposed improvements. Please revise the Synchro files with consistent phasing between the peak hours and update the capacity analysis results.

26. The proposed project includes an extensive internal network of roadways, drive aisles and parking areas; as such, special attention should be given to internal traffic circulation patterns with proper signage and pavement markings. The applicant must address the following to ensure safe and efficient internal operation:
    a. Dead-end streets are prohibited. (§265-23(I)) The proposed Road 'A' terminates in a dead-end.
    b. Intersections involving the junction of more than two streets shall be designed with extreme care for both pedestrian and vehicular safety. (§265-28(A)) For example:

the junction of Proposed Driveways 'A,' 'C,' and 'D' creates a three-way intersection that may be confusing for drivers and pedestrians.

c. Streets shall be laid out to intersect as nearly as possible at right angles with no streets intersecting another at an angle of less than 60 degrees. (§265-28(A)) Multiple roads appear to intersect at less than 60 degrees.
d. Centerline radii shall be provided for all horizontal curves to ensure adequate sight distance. Safe sight distance is to be provided at internal intersections (§265-26(B))
e. Clear-sight triangles of 75 feet measured along street center lines from their point of junction shall be provided at all intersections, and no building shall be permitted within such sight triangles. (§265-28(C))
f. An evaluation of need for left-turn lanes along main access roadway is required.
g. The required traffic control and anticipated Levels of Service for intersections along main access roadway is to be provided.

STORMWATER MANAGEMENT

27. Whetstone Run and Tributary No. 1 to Whetstone Run are identified on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for Marple Township, Delaware County, Pennsylvania (Map Numbers 42045C0104F and 42045C0103F, last revised November 18, 2009. The 100-year floodplain associated with Whetstone Run shown on the plans does not appear to follow a consistent elevation. In addition, the plans do not show a 100-year floodplain associated with Tributary No. 1. A hydrologic and hydraulic study is necessary to delineate the floodplain to confirm that the proposed development does not encroach within the flood hazard area or designated riparian buffers. (§143-4.A(3))

28. Roadway crossings or structures located within designated floodplain areas must be able to convey runoff from a 100-year design storm consistent with FEMA floodplain management requirements. (§257-21.E). Culvert design calculations should be provided for proposed stream crossings to demonstrate that the 100-year storm is safely conveyed.

29. Culverts, bridges, storm sewers, or any other facilities which must pass or convey flows from the tributary area and any facility which may constitute a dam subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105. (§257-13.E). Permits for the proposed bridges and culverts are to be provided. In particular, the proposed stream crossings at Main Blvd. approximate Station 23+50 and Driveway 'C' approximate Station 5+00 are proposing over 20 feet of fill across the stream bed.

30. A DEP approved wetland delineation report and jurisdictional determination (if required) is to be provided. (§257-13.C)

31. The existing top of bank of the water features (stream channel, lake or wetland) and dimension for the required 50-foot riparian buffer should be clearly identified. (§257-17.C)

32. An Existing Resource and Site Analysis Map (ERSAM) is required to show environmentally sensitive areas including, but not limited to: steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal pools, stream buffers, hydrologic soil groups, proposed development features, and any existing recharge areas. (§257-15.B.1)

33. Pre- and post-development peak stormwater runoff calculations are required to address the following:
    a. The limit of the redeveloped portion of the existing Don Guanella property is to be identified to verify the land cover conditions used for the pre-development runoff analysis. (§257-19.C.2)
    b. Provide a plan and summary table to show cover assumed in each drainage area in the pre- and post-development stormwater management calculations.
    c. Areas identified as undisturbed for the purposes of stormwater management calculations should not include areas of disturbance necessary for construction of the trail, pedestrian bridge, outfalls, rip-rap, associated tree clearing, etc.
    d. Undisturbed areas that drain to proposed stormwater management BMPs should be included in the stormwater management routings to demonstrate that stormwater runoff can be conveyed for the 100-year storm.
    e. The Post-Development Drainage Area Plan should be revised to include areas of disturbance in the southerly corner of the site at the proposed access driveway and adjacent to the existing track.
    f. Clarification should be provided regarding the post development drainage areas depicted on sheet 43. Specifically, the areas are unclear between DA-1P(B2), DA-1P(C2), and DA-1P(C3) and between DA-1P(A2), DA-2P(J), and DA-2P(J2).
    g. Inconsistencies between the Post-Development Drainage Area Plan and Inlet Drainage Area Plan drainage area boundaries are to be corrected.

34. Soil testing for the proposed stormwater infiltration BMPs to address the following minimum requirements:
    a. A minimum depth of twenty-four (24) inches between the bottom of the BMP and the top of the limiting zone should be provided for infiltration BMPs. (§257-16.A.1.a)
    b. Clarification should be provided to confirm how the design infiltration rate was calculated for each basin with multiple tests.
    c. Test pit locations should be clearly shown on the Post Construction Stormwater Management Plan or ERSAM.

35. Regarding the design requirements for proposed stormwater BMPs:
    a. Infiltration facilities shall be capable of completely draining the retention (infiltration) volume within 72 hours from the end of the design storm. (§257-16.A.1.c). Surface basin B2 and underground basins B3, B4, and B10 do not meet this requirement. Calculations are to be provided to confirm compliance with this requirement for all proposed stormwater management BMPs.
    b. The design for surface basin B2, and underground basins B3 and B4 do not satisfy the loading ratio requirements in accordance with the PA Stormwater BMP Manual. Calculations are required for all proposed stormwater management infiltration

BMPs to confirm that the design is consistent with a maximum impervious loading ratio of 5:1 and a maximum total loading ratio of 8:1.

c. Emergency spillway design calculations are required for the stormwater management facilities. The height of embankment must provide a minimum one (1) foot of freeboard above the maximum water surface elevation computed when the facility functions for the 100-year proposed conditions inflow (§275-25.C) In addition, adequate permanent lining and reinforcement is necessary to prevent erosion and settlement of the spillway crest.
d. Grading should be revised to limit the use of retaining walls for stormwater management basins. Basins constructed on the downstream side of retaining walls limit access for maintenance.
e. Sufficient detail or a design table is required to provide design information for each stormwater management BMP, including but not limited to: elevations of bottom of basin, top of basin, ground surface (if underground), design water surfaces, emergency spillway, and top of berm, test pits utilized for design of each BMP, groundwater or other limiting zone elevations and infiltration testing elevations.

36. Access easements are to be established for all significant stormwater controls, conveyances, and BMPs, including a 15-foot perimeter area surrounding these features that will provide the municipality sufficient ingress to and egress from a public right-of-way. (§257-33.B)

37. Regarding the storm sewer design:
    a. 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. (§257-21.D). Therefore, the storm sewer collection system upstream of stormwater management BMPs should be designed to convey stormwater runoff to the BMP without bypassing for the 100-year storm. Inlet capacity and spread calculations should be provided to confirm that stormwater runoff will not bypass to another stormwater management BMP. For example, if stormwater runoff were to bypass inlet INB121 and drain to INH14, the stormwater runoff would be contributing to drainage area DAP-1P(H3) outflowing into Basin #H3 instead of the intended design drainage area DA-1P(B6) discharging to Basin #B6.
    b. Inlets INB5, INB26, INB28, INB122, INB114, and INB107 are examples of inlets where the calculated rational flow to the inlet exceeds 10 cfs. Double inlets should be provided as necessary.
    c. Several manholes are in excess of 20-feet deep (i.e. INH16 and MHH5 are 42-feet deep). The storm sewer design should be revised to avoid excessively deep manholes and inlet boxes.
    d. Two (2) feet of cover (minimum) is required for the storm sewer pipes.
    e. Storm sewer profiles indicating utility crossings are required.

38. Stormwater discharge from storm sewer and open channels onto steep slopes is to be avoided, because adequate erosion protection cannot be provided. (§275-25.C).

39. Design for the Erosion and Sediment Pollution Control Plan shall be provided to address the following (§257-14):
    a. Calculations and details are required for the design and construction of the temporary sediment basins.
    b. Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase to maintain maximum infiltration capacity; nor shall the BMPs receive runoff until the contributory drainage areas achieve adequate stabilization. (§257-14.F.1; §257-14.F.2.) Adequate protection should be provided; and, the locations of sediment trapping devices and basins should avoid areas reserved for permanent stormwater infiltration.
    c. Provide clarification where temporary trash racks are proposed.

40. The proposed pedestrian trail should be designed in accordance with Appendix E of the Stormwater Management Ordinance, Riparian Buffer Trail Guidelines. In particular, the trail should be revised to meet the following requirements:
    a. Paved trails, if appropriate to the site, are permitted and must be located at least twenty-five (25) feet from the top of stream bank.
    b. New trailheads and trail parking areas shall meet all the stormwater infiltration and rate control requirements.
    c. Any new parking areas and trailhead clearings should not encroach on the riparian buffer in any way. The 20 space parking lot adjacent to Proposed Driveway 'J' encroaches within the riparian buffer.
    d. The installation of interpretive and educational signage is strongly encouraged along the trail to point out local natural resources and educate the public on how riparian buffers protect the watershed.

41. An operations and maintenance plan is to be provided for all stormwater management BMPs on the Post Construction Stormwater Management Plan. (§257-33).

42. The stormwater management design appears preliminary and lacking full details and plan information necessary for a complete review. Additional construction details are to be included; storm sewer design calculations and details are required; and, plans need to be provided at a more appropriate scale. In addition to providing plan review notes and/or red-lined plans, a meeting with the design engineer may be appropriate prior to resubmission.

LANDSCAPING

43. Provide a separate Planting Schedule for each of the two proposed zoning districts that, at a minimum, lists the type of planting (street tree, ornamental tree, evergreen tree, and shrub), the size of the proposed plant, and the quantities. This information is required in order to determine if tree replacement and buffer requirements are met.

44. Regarding site clearing and tree replacement within the PCR District (§300-33A):

a. In accordance with the proposed ordinance amendment, the clearing of healthy, non-diseased trees for any purpose shall not result in the removal of more than fifty (50%) of any existing trees, tree masses or hedgerows without the approval of the Board of Commissioners. The Compliance Chart on Sheet 27 states the allowed removal to be seventy-five (75%). Revise the Compliance Chart and Landscape Plans to be consistent with the ordinance requirements.
b. Delineate the areas for the method used to calculate the removal of tree masses by identifying the existing tree line, the limit of tree removals, and square-foot calculations of each.
c. The Replacement Planting Requirements for plant credits listed on the Compliance Chart are inconsistent with the proposed ordinance. Revise the Compliance Chart and Landscape Plan to match the ordinance requirements.
c. In accordance with §300-33A.F.(1)c, Trees used as part of a buffer planting (per Article X) can be included as part of the replacement calculation, but not lot trees (§280-16).
d. When clearing next to an established woodland, the mature trees on the new edge of woodland, as well as the woodland habitats, are exposed to unfavorable conditions. In order to preserve the mature trees, place a portion of the replacement trees, both shade trees and ornamental trees, along the limit of clearing to create a new woodland edge.

45. Regarding site clearing and tree replacement within the PCC District (§300-36A):
    a. Delineate on the plan the areas for how removal of tree masses were calculated. Show the existing tree line, the limit of tree removals, and square-foot calculations of each.
    b. Trees used as part of a buffer planting (per Article X) can be included as part of the replacement calculation (§300-39A.A(2)c.3), but not trees for perimeter landscaping or interior landscaping (§300-81).

46. Regarding Buffers (Article X):
    a. It is the intent of the buffer landscaping to provide a physical, visual, and acoustical separation between land uses. For all calculations, if the existing riparian buffer or existing vegetation is to be used in lieu of additional plantings, provide verification that the existing remaining vegetation in that area meets the criteria of §300-65.
    b. Along the length of the property line between the commercial and residential districts, all of the areas that do not have a sufficient existing riparian buffer must have a Type D1, B3 buffer. Where streets or detention basins are placed on the property line, the planting locations should be adjusted as required to buffer the entire length of the property line. Specifically, the area on the northwestern side of the intersection of Driveways 'G' & 'M'. (§300-67 & §300-68)
    c. Along the length of the property line between the commercial (retail) and the institutional districts, our calculations for the existing riparian buffer and existing vegetation is approximately 150 linear feet less than indicated on the Compliance chart. Clearly indicate, with a proposed tree line, where the limits of existing vegetation to remain is located. Recalculate and revise the Compliance Chart and

the Landscape Plans with the correct number of plants required for the Type A1 buffer. (§300-67 & §300-68)

d. The area on the east side of I-476 is zoned low-density residential. Along the length of the property line between the commercial area and the I-476 right-of-way, a buffer will be required. Revise the Compliance Chart and the Landscape Plans with the appropriate buffer plantings.
e. The hedgerow planting (Type D1) refers to a row of shrubs, 48" high minimum, spaced 3' on center. Revise the Compliance Chart and the Planting Schedule to include the number of shrubs proposed.

47. For all calculations, subtracting the length of property line that falls within streets to be dedicated rights-of-way is acceptable, but not driveways. For the buffer between the residential district and Reed Road, recalculate the buffer length, and revise the Compliance Chart. Recalculate the length of perimeter landscaping required and revise the Compliance Chart and Landscape Plans accordingly. (§300-80)

GENERAL

48. Due to the location of the development, SEPTA has requested to be involved in the planning process to review potential modifications to public transportation system and/or possible integration with the proposed residential community and commercial development.

49. The Preliminary Plan should be reviewed by the Township Shade Tree Commission, Environmental Advisory Committee, and Fire Marshall.

50. The applicant is reminded that the following are required prior to final approval:

a. Land Development/Improvement Securities Agreement, Deeds of Dedication of rights-of-way, and any proposed utility and drainage easements for approval by the Township solicitor. (§265-16.C; -32(C and E))
b. Letter of adequacy, NPDES Permit and applicable General Permits from the Delaware County Conservation District. (§257-23.A(4))
c. Sewage Facilities Planning Module (§300-18.F), or an exemption.
d. A contribution to the Township Recreational Fund in accordance with §265-18.
e. An Operations and Maintenance Agreement with the Township covering all stormwater controls and BMPs in accordance with §257-36.
f. A contribution to the Township Stormwater Control and BMP Operation and Maintenance Fund to defray the cost of inspection and maintenance for a 10-year period in accordance with §257-39.

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

Sincerely,

Joseph A. Mastronardo, PE
Senior Engineer
PENNONI ASSOCIATES INC.
Township Engineer

JAM/epj

cc: Joseph Romano, Director of Code Enforcement
Adam Matlawski, Esq., Township Solicitor
Tom Comitta, AICP, CNU-A, RLA, Township Planner
Bruce Goodman, Cardinal Crossing Realty Associates, L.P.
Joseph A. Damico, Esq.
Bohler Engineering
Matthew Hammond, PE, Traffic Planning and Design, Inc.
Fran Hanney, PennDOT