



ALBERT FEDERICO CONSULTING, LLC

Traffic Engineering and Mobility Solutions

133 Rutgers Avenue
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October 15, 2019

via email only

Richard Pomerantz, Chair
Westtown Township Planning Commission
1039 Wilmington Pike
West Chester, PA 19382

Re: Conditional Use - Traffic Review
Robinson Tract (aka Crebilly Farms) Development
Westtown Township, Chester County

Mr. Pomerantz:

As requested, a technical review of the following materials has been completed relative to the Westtown Township Zoning Ordinance as well as reasonable and customary standards of Traffic Engineering practice:

- Transportation Impact Study for the Robinson Tract (prepared by McMahon Associates, dated August 13, 2019)
- Conditional Use Subdivision Plan for the Robinson Tract, sheets 10 and 12 of 71 (prepared by ESE Consultants, dated August 9, 2019)

Please note that this review should be considered preliminary and subject to change based on the submission of revised materials to address the comments presented herein.

The site is located on the Crebilly Farm property along the west side of US Route 202, between West Pleasant Grove Road and PA Route 926 (Street Road). The applicant proposes to develop 317 new dwelling units. Vehicular access to the Crebilly Farms property is proposed via connections to PA Route 926 and West Pleasant Grove Road. Onsite vehicular circulation is proposed via a central Collector Road and supporting local roads, including several cul-de-sacs. Limited non-vehicular facilities are also proposed.

The following comments are offered for the Township's consideration:

1. *In consideration of conditional use approval, the Township may require the applicant to submit a development impact study which considers the impact of the proposed flexible development on traffic volume and safety. {§170-906.D(2)}*
 - a. In order to allow for consideration of the impact of the proposed development the Transportation Impact Study (TIS) should be revised to address the following:
 - i. Table 1 identifies West Pleasant Grove Road as a "Local" roadway. Table 1 should be updated to identify West Pleasant Grove Road as a Township Collector Roadway. {*Westtown Township Comprehensive Plan Update, page 9-7*}.



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- ii. The TIS identifies the internal Collector Road as an off-site improvement (page 23). The section of the Collector Road proposed as part of the development traverses the property from West Pleasant Grove Road to PA Route 926 providing access to the property. As such it should be identified as an on-site improvement.
- iii. The TIS does not identify any existing pedestrian facilities within the study area (page 6). The following should be noted:
 - (1) Facilities within the adjacent Arborview neighborhood
 - (2) Facilities within the adjacent Bridlewood neighborhood
 - (3) Recently completed facilities along Orvis Way
- iv. The traffic data used as the foundation for the capacity analysis was collected a number of different years, from 2015 to 2019. Traffic calming measures were installed along Jacqueline Drive in 2017 to address cut-through traffic. As West Pleasant Grove Road is the next east-west roadway south of Jacqueline Drive new counts are warranted.
- v. The Crash Summary (page 5) only includes data for State "Reportable" collisions¹. In order to provide a more complete assessment of transportation safety within the study area "Non-reportable" collisions should be included.
- vi. The proposed sight distance looking left from the proposed internal Collector Road along PA Route 926 is reported as 466 feet (Table 3). The Table should be updated to include the Township requirements (635 feet per the posted speed limit) and the scope of physical improvements required to provide acceptable sight distance reflected on the plans. *{§149-915.K(5)}*
- vii. The proposed sight distance looking left from the proposed internal Collector Road along West Pleasant Grove Road is reported as 440 feet (Table 3), the minimum required by Township Code. Confirm that this measurement considered the widening (approximately seven feet) of West Pleasant Grove Road required to meet Code. *{§149-903.A(2)}*
- viii. The study (*Arborview Transportation Impact Assessment, prepared by Traffic Planning and Design, dated January 2015*) referenced as the basis for the majority of assumed diversions (page 14) is not the most current version of the study. Further, this study relied on data dating as far back as 2012. These volumes are considered substantially outdated. New traffic counts should be completed, and the analysis updated.
- ix. There is insufficient information provided to evaluate validity of the "supplemental diversion" of US Route 202 traffic to the Collector Road (page 15). Additional analysis and modeling based on current traffic count data is warranted to support the supplemental diversions.

¹ "Reportable" collisions involve significant property damage, injuries and/or fatalities, and are required to be reported to the State. Collisions not meeting these criteria are not included in PennDOT records.



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- x. The anticipated increase in larger vehicles traveling along West Pleasant Grove Road and turning to/from New Street increases the possibility of potential vehicular conflicts. The impact of these increased volumes on the roadway structure of West Pleasant Grove Road, as well as the turning paths at the intersection with New Street should be evaluated.
 - xi. PennDOT classifies PA Route 926 as a "Critical Corridor". The "optimized" traffic signal timings assumed for the future conditions analyses (page 16) reduces delays by shifting a significant portion of green time from PA Route 926 to serve New Street. This will have an appreciable impact on regional mobility, degrading the peak hour level of service for the PA Route 926 approaches. Provide written confirmation from PennDOT that if the project is approved the assumed "optimized" timings can be implemented.
 - xii. The Cross Section Assumptions exhibit in Appendix I is based on a traditional widening. Alternative alignments that minimize the number of properties from which right-of-way would be needed should be considered. Additionally, the Applicant is not precluded from coordinating with property owners to determine if the right-of-way could be reasonably obtained.
 - xiii. Provide Cost Estimates for necessary improvements to accommodate future traffic. *{§149-804.A(10)}*
 - xiv. Provide an Implementation Strategy for necessary improvements to accommodate future traffic. *{§149-804.A(11)}*
2. *The burden of proof shall be upon the applicant to prove to the satisfaction of the Board of Supervisors, by credible evidence, that the use will not result in or substantially add to a significant traffic hazard or significant traffic congestion. The peak traffic generated by the development shall be accommodated in a safe and efficient manner. Such analysis shall consider any improvements to streets that the applicant is committed to complete or fund. {§170-2009.D(1)(h)}*
- a. The conclusion that the project does not adversely impact the intersection of US Route 202 and PA Route 926 appears to be based in large part on assumed diversions of traffic to Orvis Way and the proposed internal Collector Road. As noted above additional information and analyses should be provided to support the assumed diversions.
 - b. As presented the project will impact the following intersections increasing the length of required turn lanes:
 - i. US Route 202 at Pleasant Grove Road – Southbound Right Turn (+100 feet post-development over existing)
 - ii. PA Route 926 at New Street – Eastbound Left Turn (+50 feet post-development over existing)



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- c. Additional grading and/or traffic management measures appear warranted to enhance safety at the three accesses proposed to have insufficient sight distance or the exact minimum distance (with no margin for error):
 - i. Collector Road at PA Route 926 (grading)
 - ii. Road M at West Pleasant Grove Road (grading and/or roundabout)
 - iii. Collector Road at West Pleasant Grove Road (grading and/or roundabout)
- d. In order to minimize external conflict points, promote internal connectivity, reduce the number of cul-de-sacs and enhance overall safety along West Pleasant Grove Road:
 - i. Road M should be removed
 - ii. Roads L and N should be extended to form a single road
- e. The design of the internal Collector Road should incorporate suitable traffic calming measures to maintain a 35 mile per hour average travel speed.
- f. The submitted plans should be revised to ensure they accurately reflect existing driveways in the immediate vicinity of the site, including the exit-only driveway from the Westminster Presbyterian Church and new residential driveways along the north side of West Pleasant Grove Road, west of Hidden Pond Way.
- g. The plans should identify the anticipated limits of required right-of-way and/or easements to accommodate the physical improvements associated with the PennDOT project at US Route 202 and PA Route 926.
- h. The following internal intersections should be reconfigured to remove geometric irregularities:
 - i. Road E and Road F
 - ii. Road F and Road G
 - iii. Road I and Road J
- i. Additional facilities should be provided to address non-vehicular connectivity, including:
 - i. A perimeter trail around the portion of the site west of the internal Collector Road. {*Westtown Township Comprehensive Plan Update, page 9-15*}
 - ii. Connections to existing and planned facilities within along Dunvegan Road and the Arborview neighborhood. {*Westtown Township Comprehensive Plan Update, page 9-15*}
 - iii. Sidewalks along proposed roads, including accessible crossings. {*§149-916*}
 - iv. Connectivity to pedestrian attractors, including Stetson Middle School, Westminster Presbyterian Church, and the existing retail uses at US Route 202 and PA Route 926. {*§149-916*}
- j. Provisions should be made for future access from the Westminster Presbyterian Church to the internal Collector Road.



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- k. Provisions should be made for School Bus Stops, including short-term parking for drop-off and pick-up.

Please do not hesitate to contact me at 610.608.4336 or albert@federico-consulting.com should you have any questions or require additional information.

Sincerely,

Albert Federico, P.E., PTOE