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## FOUNDER

Joseph W. McMahon, P.E.

February 4, 2020

Mr. Russell Hatton, Chair  
Westtown Township Planning Commission  
1039 Wilmington Pike  
West Chester, PA 19382

**RE: Robinson Tract Residential Development  
Westtown Township, Chester County, PA  
McMahon Project No. 816451.11**

Dear Mr. Russell:

McMahon Associates, Inc. is in receipt of the Township's comment letter, prepared by Albert Federico Consulting, LLC in their capacity as the Township traffic engineer, dated January 29, 2020, in regards to the *Transportation Impact Study for the Robinson Tract*, prepared by our office and last revised December 2, 2019. The development is proposed to be located on the Crebilly Farm property along the west side of U.S. Route 202 (Wilmington Pike), between West Pleasant Grove Road and Street Road (S.R. 0926), in Westtown Township, Chester County, Pennsylvania. On behalf of the applicant, below is a summary of the comments in italics, with our responses following each comment.

*Comment #1ai: As previously noted, Table 1 should be updated to identify West Pleasant Grove Road as a Township Collector Roadway. {Westtown Township Comprehensive Plan Update, page 9-7}.*

Response: West Pleasant Grove Road does not meet the Collector Road standards under the Township's road specifications. The applicant has agreed to widen along the property frontage to meet the Township's Collector Road half-width requirement of 14 feet.

*Comment #1aii: The sections of the TIS discussing improvements should note that the internal Collector Road provides access to the property.*

Response: Complies. The Collector Road is not necessary for access to the site, but does provide secondary access locations. The TIS has been revised accordingly.

*Comment #1aiii: As previously noted, the Crash Summary only includes data for State "Reportable" collisions. In order to provide a more complete assessment of transportation safety within the study area "Nonreportable" collisions should be included. Note that the Traffic Safety Office is unaware of an outstanding request for "more detailed information". The applicant should resubmit the*

*request to the Traffic Safety Office and Township Traffic Engineer, including the specific details being requested.*

Response: Complies. Our office contacted Westtown-East Goshen Regional Police Department in October 2019 to request more detailed non-reportable crash data for evaluation. We contacted them again in January 2020 in order to request the information. The police department has indicated that pulling the reports will be very time intensive, and therefore, we have requested that the Township determine if this is necessary.

Comment #1aiv: *As previously noted, the scope of physical improvements required to provide acceptable sight distance to public roads should be clearly indicated on the plans.*

Response: Based on existing conditions, the available sight distances at the site accesses meet or exceed the Township and PennDOT requirements, as applicable. A detailed sight distance evaluation will be provided during detailed engineering, with consideration of all features along the property frontages with the development.

Comment #1v: *As previously noted, confirm that the sight distance measurements consider the widening (approximately seven feet) of West Pleasant Grove Road required to meet Code. {§149-903.A(2)}*

Response: The sight distance measurements in Table 4 of the submitted TIS reflect existing roadway geometry. As noted in the submitted TIS, the available sight distances for each of the accesses will be provided upon detailed engineering. The applicant is responsible to ensure adequate sight distance is provided at the site accesses.

Comment #1vi: *Provide calculations supporting the assumed diversions associated with Orvis Way and the proposed Collector Road. Additionally, cross reference the Collector Road diversions within the body of the study with the figures in Appendix K.*

Response: Complies. As noted within the submitted TIS, the assumed diversions along Orvis Way were applied based on the Arborview TIA, which was previously approved by the Township. Calculations detailing travel times for diversions along the proposed Collector Road were provided in Appendix K of the submitted TIS. The revised TIS provides clarification of the diversions within the report and the figures provided in Appendix K.

Comment #1vii: *The Travel Time Comparisons presented in Appendix K should be revised to address the following:*

*(1) Verify the assumed route lengths. The Diversion Routes generally appear to be shorter than the Base conditions.*

*(2) Ensure that the impacts of the regular queueing along US Route 202 North during the morning peak, extending from the interchange into the study area, is included.*

*(3) The evaluation of diversions should include an alternate that considerations operations following the completion of the PennDOT improvements planned for US Route 202 and PA Route 926.*

*(4) The traffic calming anticipated to be installed along Bridlewood Boulevard should be considered.*

Response:

(1) Complies. The route lengths have been verified. The lengths provided in Appendix K of the submitted TIS are accurate.

(2) Complies. Based on a review of video collected at the Wilmington Pike (U.S. Route 202) and Skiles Boulevard intersection during the traffic count period, the vehicular queuing along northbound Wilmington Pike (U.S. Route 202) did not extend into the study area, and therefore, no revisions have been applied to the diversion assumptions.

(3) Complies. Appendix K includes an alternative set of diversion travel time calculations with PennDOT's proposed improvements at the Wilmington Pike (U.S. Route 202) and Street Road (S.R. 0926) intersection. As shown in these calculations, the diverted route travel time is nearly identical or shorter than the base route, and therefore, the diversion assumptions are unchanged with completion of PennDOT's project.

(4) As noted in the calculations provided in Appendix K, Diversion G, which utilizes Bridlewood Boulevard, is 185.2 seconds faster than the base route. While the type of traffic calming along Bridlewood Boulevard is unknown, it is anticipated that any traffic calming treatment would add significantly less than 185.2 seconds of delay per vehicle, and therefore, the traffic diversions remain unchanged.

Comment #viii:

*As previously noted, the anticipated increase in larger vehicles traveling along West Pleasant Grove Road and turning to/from New Street increases the possibility of vehicular conflicts. It is noted that*

*(1) The applicant has indicated a willingness to widen the roadway along the property frontage, but additional clarification regarding the specific scope of work is warranted.*

*(2) West Pleasant Grove Road is designated as a Collector Road and the total Right-of-way shall be 60 feet and cartway width shall be 28 feet. {§149-903.A(2)}*

Response:

West Pleasant Grove Road does not meet the Collector Road standards under the Township's road specifications for Right-of-Way and roadway width. The applicant has agreed to widen along the property frontage to meet the Township's Collector Road half-width requirement of 14 feet, and to provide 30 feet of Right-of-Way on center along the property frontage.

Comment #ix:

*As previously noted, the future operations presented for PA Route 926 and New Street rely primarily on "optimized" traffic signal timings that appear unlikely to be approved by PennDOT. Written confirmation from PennDOT should be provided that the assumed "optimized" timings can be implemented. If confirmation cannot be provided an alternative analysis utilizing a timing approved by the Township should be provided.*

**Response:** The optimized timings utilized within the submitted TIS resulted in a significant 25 to 50 percent reduction in overall intersection delay, while minimally impacting the through movements along Street Road (S.R. 0926). In addition to signal optimization, as indicated in the TIS, the applicant proposes to provide traffic signal coordination along Street Road (S.R. 0926) as requested by PennDOT, which will further improve traffic flow and platooning along the corridor. This signal system and the signal detection will ultimately govern the green time allocation between Street Road (S.R. 0926) and New Street. PennDOT issued a TIS comment letter dated December 30, 2019. There were no comments regarding the signal timings at this intersection.

**Comment #x:** *As previously noted, the Cross-Section Assumptions Exhibit for PA Route 926 and New Street 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.*

**Response:** There is no narrowing of lanes or reasonable intersection alignment that would eliminate the need for right-of-way outside the applicant's control. The applicant is not required to obtain private property for off-site improvements by Township criteria. If the Township and/or PennDOT want the right-of-way, these entities have the means to acquire it.

**Comment #xi:** *As previously noted, Cost Estimates for necessary improvements to accommodate future traffic should be provided. {§149-804.A(10)}*

**Response:** Will comply. Cost estimates for improvements to be constructed by the applicant will be provided upon concurrence of the improvements between the applicant, PennDOT, and the Township.

**Comment #xii:** *As previously noted, an Implementation Strategy for necessary improvements to accommodate future traffic should be provided. {§149-804.A(11)}*

**Response:** Will comply. An implementation strategy for improvements to be constructed by the applicant will be provided upon concurrence of the improvements between the applicant, PennDOT, and the Township.

**Comment #2a:** *The conclusion that the project does not adversely impact the intersection of US Route 202 and PA Route 926 continues to be based in large part on assumed diversions. As noted above, additional supporting information and analyses should be provided.*

**Response:** As noted within the submitted TIS, the proposed collector road provides an alternate route to motorists and provides relief at the Wilmington Pike (U.S. Route 202) and Street Road (S.R. 0926) intersection, which was the Township's intent in requiring it as we

understand it. As detailed in Appendix K, the diversions are based on vehicular travel times, which is the best available data upon which to assess route choice in the future. Even with considerably less traffic diversions than currently assumed, the project does not adversely impact the intersection of US Route 202 and PA Route 926 based on overall delay in accordance with PennDOT criteria.

*Comment #2b: The Applicant has indicated that turn lanes will be provided to accommodate post development volumes at the following intersections, but these improvements are not reflected on the plans:*

- i. US Route 202 at Pleasant Grove Road – Southbound Right Turn*
- ii. PA Route 926 at New Street – Eastbound Left Turn*

**Response:** The comment above references an eastbound left-turn lane, which is incorrect. As stated in the TIS, the applicant proposes to provide a southbound right-turn lane along Wilmington Pike (U.S. Route 202) at West Pleasant Grove Road and a westbound right-turn lane along Street Road (S.R. 0926) at New Street. Plans will be provided upon concurrence of the improvements between the applicant, PennDOT and the Township.

*Comment #2ci: 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):*

- (1) Collector Road at PA Route 926 (grading)*
- (2) Road M at West Pleasant Grove Road (grading and/or roundabout)*
- (3) Collector Road at West Pleasant Grove Road (grading and/or roundabout)*

**Response:** Based on existing conditions, the available sight distances at the site accesses meet or exceed the Township and PennDOT requirements, as applicable. A detailed sight distance evaluation will be provided during detailed engineering, with consideration of all features along the property frontages with the development.

*Comment #2cii: 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:*

- (1) Road M should be removed*
- (2) Roads L and N should be extended to form a single road*

**Response:** The proposed internal roadway design is safe and has sufficient internal connectivity. Removing Road M and extending roads L and N does not create any additional internal connectivity or enhance safety, rather it unnecessarily adversely impacts the environmentally sensitive areas in the northern portion of the property.

*Comment #2ciii: The design of the internal Collector Road should incorporate suitable traffic calming measures to maintain a 35 mile per hour average travel speed.*

**Response:** The design of the Collector Road will be determined during land development.

*Comment #2iv: The submitted plans should be revised to ensure they accurately reflect existing driveways in the immediate vicinity of the site, in particular the exit-only driveway from the Westminster Presbyterian Church.*

**Response:** The exit-only driveway from Westminster Presbyterian Church is on the plan.

*Comment #2v: 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.*

**Response:** PennDOT has yet to fully engineer the project. The applicant is proposing an 8-foot increase along US Route 202 and a 15-foot increase along PA Route 926 from the existing Right-of-Way along the property frontages.

*Comment #2vi: The following internal roadways should be reconfigured to remove geometric irregularities:*  
*(1) Road E and Road F (provide a curve)*  
*(2) Road F and Road G (provide a curve)*  
*(3) Road I and Road J (remove the jog within the intersection)*

**Response:** The internal intersection design complies with section 149-907.A of the Township SALDO, which does not apply during the conditional use process.

*Comment #vii: Additional facilities should be provided to address non-vehicular connectivity, including:*  
*(1) A perimeter trail around the portion of the site west of the internal Collector Road. {Westtown Township Comprehensive Plan Update, page 9-15}*  
*(2) Connections to existing and planned facilities along Dunvegan Road and within the Arborview neighborhood. {Westtown Township Comprehensive Plan Update, page 9-15}*  
*(3) Sidewalks along proposed roads, including accessible crossings. {§149-916}*  
*(4) 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}*

**Response:** Not required.

*Comment #viii: Provisions should be made for future access from the Westminster Presbyterian Church to the internal Collector Road.*

**Response:** Not required

*Comment #ix: Provisions should be made for School Bus Stops, including short-term parking for drop-off and pick-up.*

**Response:** During land development, the applicant will coordinate with the school district with respect to school bus stops.

If there are any questions or if additional information is needed, please feel free to contact me at [nkline@mcmahonassociates.com](mailto:nkline@mcmahonassociates.com) or (610) 594-9995.

Sincerely,



Nicole R. Kline-Elsier, P.E., PTOE  
Regional Service Leader - Traffic

NRKE

cc: Robert Pingar, P.E., Westtown Township  
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