

July 18, 2012

Mr. Dan Piazza  
VRJ Associates, L.P.  
401 S. Schuylkill Avenue  
Norristown, PA 19403

RE: Roadway Design Evaluation  
Westover Country Club Redevelopment | Recreation Plan  
West Norriton Township, Montgomery County, PA  
McMahon Project No. 812073.11

Dear Mr. Piazza:

As you are aware, McMahon Associates, Inc. (McMahon) coordinated with West Norriton Township's Traffic Engineer relative to the scope of the Traffic Impact Study (TIS) for the proposed redevelopment of the Westover Country Club. In addition to the TIS, the Township Traffic Engineer requested a roadway design evaluation of Port Indian Road and S. Schuylkill Avenue in the vicinity of the site in order to evaluate existing conditions along these roadways that will provide access to the site. The evaluation, as it was done previously for the *Traffic Impact Study for the Age-Qualified Residential Community, September 2006*, included a cursory inventory of cartway widths, signage, guide rail, horizontal and vertical geometry, drainage structures, and pavement conditions. The field view was recently performed along Port Indian Road and Schuylkill Avenue during normal weather and operating conditions. The conditions along these roadways were compared to the Resurfacing, Restoration, and Rehabilitation (3R) criteria, as contained in PennDOT's *Publication 13M, Design Manual, Part 2*. Based on our field view, we recommend that the Township consider the following low cost safety improvement measures along the subject roadways:

#### Port Indian Road

- Provide widened shoulder areas (two to four feet minimum) in the vicinity of substandard horizontal and vertical geometry in order to provide a refuge if opposing traffic crosses into the oncoming lane. Significant widening (in terms of width or length of improvements) may result in increased travel speeds along Port Indian Road particularly due to the grades of the roadway.
- Provide appropriate warning signs and delineators at curves and other roadside obstructions and hazards.
- Provide roadside safety improvements at all culvert crossings along Port Indian Road to eliminate any undesirable roadside hazards. These improvements would include replacement of the existing railings with proper guide rail and end treatments, as well as improvements to embankments and modification of culvert headwalls.
- Replace worn signage and pavement markings along the roadway.

**PRINCIPALS**  
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S. Schuylkill Avenue

- Provide clearing of vegetation along the northwest quadrant of the Schuylkill Avenue at the S. Schuylkill Avenue/S. Schuylkill Avenue intersection (i.e., near the sharp curve and East Indian Lane access) to improve sight distance or consider additional stop control, as necessary.
- Replace worn signage and pavement markings along the roadway.
- Provide widened shoulder areas (two to four feet minimum) south of Yorktown Road and in the vicinity of substandard horizontal and vertical geometry.
- Provide roadside safety improvements (e.g., guide rail, end treatments, shoulders etc.) along S. Schuylkill Avenue, south of Yorktown Road, to eliminate any undesirable roadside hazards.

At this time we are not aware of any specific traffic problems or issues along these roadways, and as such, additional measures (e.g., modified traffic control, traffic calming measures, etc.) may be identified by the Township or others upon completion of a more detailed roadway design evaluation or safety audit. These recommendations are based solely on a visual survey of the roadways and no testing or analysis (e.g., site distance analysis, vehicular speed study, review of crash data, etc.) was performed. The comments in this letter are presented as professional opinions to a reasonable degree of engineering certainty and no warranty is meant or implied.

It is recommended that this letter be submitted to the Township and Township Traffic Engineer along with the TIS reports for their consideration.

If you should have any comments or questions, please do not hesitate to contact our office at your convenience.

Sincerely,



John J. Yurick, P.E., PTOE  
Project Manager

JJY/jdg/ab

cc: Adam Brower, P.E., E.B. Walsh & Associates, Inc.  
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