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April 14, 2015

Jason Bobst, Manager
West Norriton Township
1630 W. Marshall Street
Jeffersonville, PA 19403

Re: Westover Sporting Complex - VRJ Associates, L.P.
South Schuylkill Avenue and Port Indian Road
West Norriton Township, Montgomery County, PA

Dear Mr. Bobst:

In accordance with your request, I have completed a review of the Westover Sporting Complex proposed as a redevelopment of the Westover Golf Course site with frontage along South Schuylkill Avenue and along Port Indian Road in West Norriton Township, Montgomery County, Pennsylvania. I am in receipt of a Traffic Impact Study (TIS) prepared by McMahon Associates, Inc., dated July 12, 2012, a Roadway Design Evaluation for Port Indian Road and for Schuylkill Avenue prepared by McMahon Associates, Inc., dated July 18, 2012, and Preliminary Land Development Plan prepared by Edward B. Walsh & Associates, Inc., dated 12-23-14.

The site is currently occupied by an 18-hole golf course with clubhouse, restaurant, and banquet/meeting facility. The existing clubhouse, restaurant, and banquet/ meeting facility, comprised of 30,000 square feet of floor space, will be maintained, as will five holes of the existing golf course (in addition to four holes to remain situated on the east side of South Schuylkill Avenue). It is proposed to eliminate the remaining nine holes of the golf course, and construct a new clubhouse comprised of 40,000 square feet of floor space plus a variety of sports fields, courts and other venues including five little league sized baseball fields, a batting cage, a football field and track facility, an Olympic size swimming pool and a second smaller swimming pool, two tot lots, two picnic pavilions, five basketball courts, ten tennis courts, a skate park, and one championship soccer field plus four other soccer fields including one undersized soccer field. It is proposed to provide on-site parking to accommodate a total of 1,760 vehicles.

Primary access to the site will be maintained via a driveway that intersects South Schuylkill Avenue at a point opposite Rivers Edge Drive approximately 600 feet south of Brandon Road. It is proposed to construct two new driveways that will intersect Port Indian

Road; and, it is proposed to extend Hemlock Road into the site to provide a fourth point of access. My comments are as follows:

TRAFFIC IMPACT STUDY

1. Per PennDOT Pub. 46: The TIS is unchanged from its completion date of July 12, 2012. The TIS should be updated based on new traffic counts, and the analysis revised using updated software in compliance with various default values including saturation flow, peak hour factors, lost time adjustment at signalized intersections, and critical and follow-up headways at unsignalized intersections.
2. The TIS focuses on the weekday PM peak hour and a Saturday midday peak hour. During the discussion of the scope for the TIS, it was requested that clarification be provided to support that there would be no more than negligible use of the facilities during the weekday AM time period. A discussion to this affect, with supporting documentation, should be included in the report.
3. Also during the discussion of the scope for the TIS, it was requested that a separate analysis be provided whereby Hemlock Road is not used for full access, but pedestrian/emergency access only. This alternative access analysis should be included in the report.
4. Also during the discussion of the scope for the TIS, it was requested that the TIS include a review of the parking supply needs, and a review of the internal circulation including intersection alignment and parking aisles that intersect the main roads through horizontal curves, etc. The TIS should be revised to include this discussion.
5. Per SALDO Section 1008: Due to the variety of uses proposed in the development, the potential seasonal fluctuations of usage of the various facilities, and the lack of published sources to properly model anticipated trip generation for such a land use or many of the individual components, the methodology used to project site generated traffic appears to be generally acceptable for most of the individual uses under typical conditions. It is not clear that use of the existing and the proposed clubhouses are properly considered in the estimation of trip generation. There also needs to be some discussion on special events such as tournament/championship soccer, football games, banquets, etc., time of day and day of the week that special events might be expected to occur, the amount of traffic these events might generate, and what type of special provisions might be required to accommodate special events in conjunction with ongoing activities at the other uses in the complex.
6. Per SALDO Section 1008: A description of the number of fields/courts/venues for the three trip generation sites should be provided and compared with the proposed development in terms of total number of fields/courts/venues and in terms of number of fields/courts/ venues per acre.

7. Per SALDO Section 1008: The acreage used for parking was subtracted from the total site acreage in calculating the trip generation rate per acre for the three trip generation sites; and, the acreage used for parking at the existing clubhouse and the remaining five golf holes was subtracted from the total site acreage in calculating the trip generation per acre for the proposed development. The rationale for deducting these site areas is not clear since parking is an integral part of each site. Clarification, including an alternative calculation for comparison purposes, should be provided.
8. Per SALDO Section 1008: The TIS should include a detailed discussion of the potential future uses of the existing clubhouse, restaurant, and banquet/meeting facility and the proposed new clubhouse including calculation of trip generation for the uses proposed within each building (only for any change in use for the existing building), time of day and day of the week for peak usage of the two buildings, and whether the usage of these two buildings should be surcharged on the trip generation of the outdoor facilities since at least two of the three trip generation locations used to model trip generation for the proposed development do not have comparable indoor facilities. A discussion relative to the continued use of the existing clubhouse, restaurant, and banquet/meeting facility and golf course, in identical fashion to the current usage, should also be provided.
9. Per SALDO Section 1015: Contrary to the recommendation provided in the TIS, the Traffic Impact Fee should be paid at the appropriate time during the land development process similar to any other new land development in the Township. This can be paid either in one lump sum for the entire development, or phased according to the build-out of the development as each phase is proposed to come on-line. In accordance with the Impact Fee legislation, the results of an after-study may be used to adjust the fee(s) already paid.
10. Per SALDO Section 1011: Based on the estimated trip generation included in the TIS, but subject to resolution of comments relative to the calculation of the total new trip generation, the proposed development is preliminarily anticipated to generate a total of 358 new PM peak hour trips. The resultant Traffic Impact Fee calculation is preliminarily estimated to be \$262,929.52 (i.e., 358 new PM peak hour trips X \$734.44 per PM peak hour trip = \$262,929.52).
11. The Applicant must agree to conduct an after-study of the proposed development, potentially at more than one time of the year and perhaps during a special event, and abide by the findings of the after-study as agreed to after full review by Township staff.
12. Figure 7 should be corrected relative to the total distribution percentages applied to West Main Street and to School Lane.
13. A discussion should be added to the TIS relative to the area of influence of the proposed facility (i.e., is the proposed facility intended to primarily serve the residents of West Norriton Township or will there be efforts to attract users from

areas outside the Township?). The distribution percentage of 35% assigned to Egypt Road suggests a significant attraction of users outside the Township.

14. Be aware that West Norriton Township has been planning for the closure of School Lane at West Main Street. This, together with the alternative access plan for the extension of Hemlock Road for pedestrian/emergency access only will result in a diversion of traffic through the intersection of West Main Street with Egypt Road/Jefferson Avenue/Orchard Lane. The intersection of West Main Street and Egypt Road/Jefferson Avenue/Orchard Lane should be added to the study area, particularly in the case for the alternative access analysis with pedestrian/emergency access only via Hemlock Road.
15. Per SALDO Section 503: It is proposed to widen Port Indian Road for a separate left turn lane into the north access driveway. The plans indicate widening of the entire frontage along Port Indian Road.
16. The Sight Distance Analysis recommends that landscaping along the property frontage and vegetation/tree removal along Port Indian Road is required to provide adequate safe sight distances; and, is subject to verification during the detailed engineering of the site access design.
17. Per PennDOT Pub. 201: The development of hourly traffic volumes for the Traffic Signal Warrant Analysis at the intersection of Egypt Road and Port Indian Road, and in particular for the Port Indian Road approach, should be explained. A Spot Speed study should be completed along Egypt Road to determine the 85th vehicle operating speeds for use in evaluating signal warrants. The Traffic Signal Warrant Analysis should be completed with and without provision of access via Hemlock Road. While not affecting the requirements for the side street approach, the Four-Hour and Peak Hour warrants appear to have been evaluated with the assumption of two lanes per direction along Egypt Road. If after re-analysis of the Traffic Signal Warrants for this intersection continue to indicate that installation of a new traffic control signal is still not warranted, it is questionable that safe and efficient access can be provided to/from the proposed development via Port Indian Road. If access via Port Indian Road is to remain as part of the development, traffic monitoring of this intersection must be made a condition of approval, and funds escrowed to install a new traffic control signal in the event actual traffic volume satisfies warrants for installation of a new traffic control signal.
18. A Level of Service matrix should be included in the TIS.
19. The results of the level of service analysis indicate a need to widen Egypt Road at School Lane for a separate eastbound left turn lane with optimized traffic signal timings. If full access via Hemlock Road remains an integral part of the proposed development, these improvements should be implemented by the Applicant.
20. The Level of Service figures should be corrected to illustrate a separate left turn lane and a shared through/right turn lane for the northbound approach of South

Schuylkill Avenue. The length of the northbound left turn lane should be increased to 100 feet as a condition of approval for the proposed development.

21. One or more Highway Occupancy Permits may be required for improvements within the state highway right-of-way along West Main Street and/or Egypt Road. New or revised Traffic Signal Permits may also be required. All correspondence to/from PennDOT should be copied to the Township.
22. Per Zoning Section 1202: A Parking Study should be provided to support the parking tabulation provided on the plans. The Parking Study must address parking requirements to accommodate special events in addition to the continued use of other facilities to the extent applicable. The results of the Parking Study must show that all parking needs, including the convenience of parking, can be accommodated on-site so there is no overflow parking into the surrounding neighborhoods. Indeed, special provision for on-site overflow parking may have to be considered for special events. Reference comment #48 for additional guidance.
23. The Roadway Design Evaluation recommends the Township consider implementation of a number of low cost safety improvement measures along Port Indian Road and along Schuylkill Avenue. Replacement of worn signage and pavement markings along both roads should be implemented by the Township as part of normal maintenance activities. The remaining recommendations should be implemented by the Applicant in conjunction with access improvements to either roadway.
24. The Roadway Design Evaluation also suggests that additional measures may be identified upon completion of a more detailed roadway design evaluation or safety audit. These more detailed evaluations should be completed by the Applicant and any recommendations be implemented in conjunction with access improvements at the Applicant's expense.

PRELIMINARY LAND DEVELOPMENT PLAN

25. Per SALDO Section 503: The South Schuylkill Avenue driveway should intersect South Schuylkill Avenue at a 90° angle and properly aligned with Rivers Edge Drive.
26. A separate signage and pavement marking plan should be included in the plan set.
27. The Truck Circulation Plan is based on a WB-50 semi-trailer. Unless it can be demonstrated that truck access can be limited or restricted to a WB-50 semi-trailer, the Truck Circulation Plan should be revised for a WB-62 design vehicle as well as the appropriate emergency response vehicle.
28. A separate pedestrian circulation plan should be included in the plan set. Speed tables at intersections along the main internal circulation road should be considered to improve safety at pedestrian crossings and calm vehicular traffic.

29. Per SALDO Sections 503 and 504 and PennDOT Pub. 441: Sight distances must be evaluated for each internal intersection relative to landscaping, structures, parking facilities, etc.
30. Per SALDO Section 503: The plans indicate widening of South Schuylkill Avenue at the access driveway for a separate southbound right turn deceleration lane and a separate northbound left turn lane. A short southbound left turn lane (75 feet plus the appropriate tapers) should also be provided into Rivers Edge Drive.
31. While lane lines or dimensions are not shown, the plans indicate the South Schuylkill Avenue driveway to be 38 feet wide narrowing down to 24 feet wide. The 38 foot width appears to be excessive for a single inbound lane and a single outbound lane. Additional detail must be added to the plans.
32. Per SALDO Section 505: New sidewalk is indicated along South Schuylkill Avenue. All curb ramps must be shown to be ADA compliant with proper crosswalk markings across the site driveway. Sidewalks/trails should be provided extending into and throughout the site; and, crosswalks should be delineated across South Schuylkill Avenue.
33. Per SALDO Sections 504 and 505: The parking area parallel to the main circulation road between station 24+00 and 31+50 is too close to the main circulation road and must be set back a sufficient distance to provide a buffer/screen to separate parked vehicles from moving traffic along the road, to provide larger corner radii (i.e., 25 feet desirable) at the driveways that intersect the main circulation road, and provide a larger centerline radius for the access roads at both ends of the parking bay. The parking lot access roads must provide sufficient stacking for a least one exiting vehicle at a 90° angle to the flow of traffic along the main access road. A crosswalk should be provided across the main circulation road at this intersection. The driveway at the west end of the parking bay should be reconfigured to provide proper alignment with the driveway opposite along the east side of the existing clubhouse, restaurant, and banquet/ meeting facility.
34. Per SALDO Section 504: The main circulation road through the intersection at approximate station 23+75 does not properly transition to the widened boulevard treatment that begins west of the intersection. Signage and pavement markings will be required to guide vehicles safely past the nose of the median. The pedestrian crosswalk should be properly aligned to the corners of the intersection. An additional crosswalk should be provided across the south leg of the intersection, and perhaps the east leg of the intersection. The mid-block crosswalk south of the intersection should be eliminated.
35. Per SALDO Section 503: The plans should consider replacement of the median with a continuous center left turn lane for a total cross-section width of 40 feet for the main road for its entire length through the site.

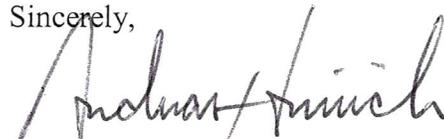
36. Per SALDO Section 504: The exit from the drop-off lane in front of the existing clubhouse, restaurant, and banquet/meeting facility should intersect the main circulation road at a 90° angle. The right turn entry and right turn exit corner radii should be 25 feet while the other two corner radii can be decreased to 5 feet.
37. Per SALDO Section 505: It is desirable to provide a grass strip at least four feet wide between the main circulation road and all adjacent sidewalks. All curb ramps must be shown to be ADA compliant. All sidewalks shall be at least five feet wide. Where sidewalk is provided, ADA compliant crosswalks should be properly delineated across the opening of all intersecting driveways.
38. Per SALDO Section 504: Corner radii of at least 25 feet should be provided for the driveways that intersect the main circulation road at station 19+30 and at station 16+10.
39. There should be no on-street parking along the main circulation road and NO PARKING signage must be added to the plans.
40. Per SALDO Section 505: The crosswalk with ADA compliant curb ramps across the main circulation road in the vicinity of station 14+75 should be better positioned in the intersection. A crosswalk, with ADA compliant curb ramps should also be provided across the parking lot access driveway at this location.
41. Per SALDO Section 503: It is not clear what purpose is served by the rotary/roundabout in front of the existing clubhouse, restaurant, and banquet/meeting facility. Please provide an explanation or eliminate the rotary.
42. Per SALDO Section 504: The provision of two connector roads connecting two adjacent parking aisles in the vicinity of the skate park is not necessary. One of the connectors should be eliminated or realigned opposite the last parking aisle in the parking field at the basketball court picnic pavilion. All corner radii should be increased to 25 feet at the subject intersections. Provide sidewalk connectivity with crosswalks and ADA compliant curb ramps through the intersection(s).
43. Per SALDO Section 503: Signage and pavement markings will be required to guide vehicles safely past the nose of the median through the intersection at approximate station 9+00.
44. It is desirable to realign the driveways at stations 6+00 and 6+75 directly opposite each other in a single four-way intersection.
45. Per SALDO Section 505: New sidewalk is indicated along Port Indian Road. All curb ramps must be shown to be ADA compliant with proper crosswalk markings across the site driveways.
46. Per SALDO Section 503: The parking area parallel to Port Indian Road should provide a larger centerline radius for the south site access road and provide larger

corner radii (i.e., 25 feet desirable) at the intersection with Port Indian Road. The parking lot access roads must provide sufficient stacking for a least one exiting vehicle at a 90° angle to the flow of traffic along Port Indian Road.

47. Per Zoning Section 1410: It is proposed to provide on-site parking to accommodate a total of 1,760 vehicles. The provided parking calculation requires a minimum of 1,758 parking spaces. The parking calculation does not include a parking requirement for the batting cage, the swimming pools, the tot lots or the picnic pavilions, and assumes these uses to be ancillary to the remaining uses. The Applicant should provide documentation to assure there will be a sufficient parking supply to adequately accommodate actual peak parking demand.
48. Per Zoning Section 1410: The plans should indicate seating capacity in the existing clubhouse, restaurant, and banquet/meeting facility, the proposed clubhouse, and at the championship soccer field for the purpose of assessing peak parking demand. Bleacher seating shown in previous plans has been removed from the plans. A description of spectator attendance at the championship soccer field should be provided to include numbers of spectators, vehicle parking requirements and special event traffic control. Simultaneous use of the existing and the proposed clubhouse, together with typical usage of other outdoor facilities may be a strain on both traffic and parking far in excess of the findings of the Traffic Impact Study. It should also be noted that the championship soccer field is in a location that is not convenient to parking.
49. The crosswalk/golf cart crossing at approximate station 2+10 should be relocated into the intersection with the parking access along Port Indian Road.

If you should have any questions, or wish to discuss these issues in greater detail, please call me at your convenience. Additional comments may follow.

Sincerely,



Andreas Heinrich, P.E., P.T.O.E.
Principal

AH:rh

cc: Christen G. Pionzio, Esq.
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