



January 8, 2023

Mr. John Granger, Township Manager
West Vincent Township
729 St. Matthews Road
Chester Springs, PA 19425

RE: Traffic Engineering Review
Pothouse – Kimberton Self Storage
West Vincent Township, Chester County
McMahon Project No. 822C97.11

Dear Mr. Granger:

McMahon Associates, Inc. completed a traffic engineering review of the proposed self-storage facility development located on the east side of Pottstown Pike (PA Route 100), south of Conestoga Road (PA Route 401). Access to the site is proposed via one new local road access along PA Route 100. It is noted that according to the *Ludwig's Corner Strategic Vision and Community Design Plan* (April 2005), the Township has planned that the Lexington Boulevard will create a loop road through the village beginning in the south along PA Route 100 at the subject property, continue northward across PA Route 401 and through the existing section of Lexington Boulevard in the Weatherstone community, and ultimately intersect PA Route 100 opposite Nantmeal Road.

- *Preliminary Minor Subdivision & Land Development Plan for Pothouse – Kimberton, LLC Self Storage*, prepared by Commonwealth Engineers, Inc., dated November 3, 2022.

Preliminary traffic volumes to be generated by the self-storage facility were prepared based on trip generation data compiled from numerous studies contained in the Institute of Transportation Engineers (ITE) publication, *Trip Generation, 11th Edition*. **Table 1** presents the preliminary vehicular trip generation estimates for the proposed facility.

Table 1. Preliminary Vehicular Trip Generation Estimate ⁽¹⁾

Land Use	Size	Daily	Weekday Morning Peak Hour ⁽³⁾			Weekday Afternoon Peak Hour ⁽³⁾		
			In	Out	Total	In	Out	Total
Self-Storage Facility ⁽²⁾	102,000 s.f.	148	5	4	9	7	8	15

(1) Based on the ITE publication, *Trip Generation Manual, 11th Edition*.

(2) ITE Land Use Code 150 for Mini-Warehouse.

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Based on our review of the above document and in consideration of the Township's ordinances and prior master planning efforts for Ludwig's Village, we offer the following comments for the information of the Township and action by the applicant.

1. SALDO Section 315-13.G.(2)(j) - The planned Lexington Boulevard extension has been contemplated by the proposed design by providing a portion of an access roadway to PA Route 100 (with a dedicated right-of-way to the Township) and access to the adjacent parcels provided along the roadway segment rather than direct access to PA Route 100. Further comments regarding the roadway and access design follow herein.
2. SALDO Section 315-13.I.(5)(a){3} - A traffic impact study should be prepared to evaluate the proposed development and its impacts on the existing roadway network particularly due to the planned roadway connection through the subject parcel. The traffic impact study should identify the ultimate design needs of the proposed Lexington Boulevard Extension and its intersection with PA Route 100 so that it will assist the Township in determining the needs of the future roadway connection and ensure that the necessary improvements are not precluded by the proposed self-storage development. Preliminarily, we recommend the following adjustments to the geometric design:
 - a. Provide a right turn deceleration lane along PA Route 100 at the proposed roadway intersection.
 - b. Provide left-turn lanes along the new Lexington Boulevard Extension at the driveways for the proposed self-storage facility and the existing building on UPI 25-6-84 (not proposed for development now) to accommodate left-turn entering movements due to the proximity to PA Route 100.
 - c. The proposed driveways for the existing building on UPI 25-6-84 and the proposed self-storage facility along the Lexington Boulevard Extension should be located opposite one another and located as far from PA Route 100 as feasible.
 - d. Provide separate left-turn and right-turn lanes on the proposed side street.
 - e. Provide for future traffic signalization including conduit.
 - f. Accommodate turning movements for emergency vehicles and tractor trailers.
3. SALDO Section 315-43.A.(1) - As previously noted, the planned Lexington Boulevard extension has been contemplated by the proposed design by provided a portion of an access roadway to PA Route 100 (with a dedicated right-of-way to the Township) and access to the adjacent parcels provided along the roadway segment rather than direct access to PA Route 100. Further comments regarding the roadway and access design follow herein and the results of a traffic study (see prior comment) should also be considered.
4. SALDO Section 315-43.A.(2) - The plans provide for a future roadway and right-of-way for the Lexington Boulevard extension; however, the necessary design must be verified through completion of the traffic impact study, as previously noted.
5. SALDO Section 315-43.A.(3) - Based on the limited length of the Lexington Boulevard extension and the limitations of the plan, our office is not able to complete a comprehensive review of how

the proposed roadway design would tie into a future section of the roadway extension and if the overall roadway (between PA Route 100 and PA Route 401) would provide an optimal design in relation to lot access, grading, alignment, drainage, and sight distance. As such, it is recommended that a line-and-grade layout of the section of the Lexington Boulevard Extension between PA Route 100 and PA Route 401 should be prepared in order to confirm the proposed design is adequate.

6. SALDO Section 315-43A.(4) – The proposed segment of Lexington Boulevard should be designed and constructed to serve as a loop road consistent with the long-term planning of the township.
7. SALDO Section 315-43.A.(8) – The applicant proposes to construct a portion of the Lexington Boulevard extension on the subject parcel. The interim condition will result in a partial street, which is not permitted. A waiver will be required and it is preliminarily recommended that an adequate turnaround area be provided in accordance with Section 315-43.F for the interim condition.
8. SALDO Section 315-43.(A).(10) – Lexington Boulevard is not currently proposed to be constructed to the eastern property line for future extension.
9. SALDO Section 315-43.B.(2) – It is preliminarily recommended that the proposed segment of Lexington Boulevard extension provide a minimum street width of 24 feet (currently proposed) and a minimum right-of-way of 60 feet (50 feet proposed) consistent with the sections of Lexington Boulevard in Weatherstone. Additional roadway width and right-of-way may be needed to accommodate turning lanes and at the PA Route 100 intersection based on the recommended additional studies and roadway layout evaluation noted above. Also, the proposed Lexington Boulevard Extension right-of-way should be labeled "Required Right-of-way (to be deeded to West Vincent Township)". The Township should indicate if the right-of-way will be taken now or in the future.
10. SALDO Section 315-43.B.(2)(a) – The plans should be revised to clearly label the existing legal right-of-way along the PA Route 100 site frontage.
11. SALDO Section 315-43.C – Please provide a roadway profile for the proposed Lexington Boulevard Extension within the property in order to evaluate the proposed road grade within the property. In addition, if feasible or available, please provide information regarding the existing grades within the property to the east (i.e., UPI 25-7-8.1) to determine the feasibility of extending Lexington Boulevard in the future. Preferably, the line and grade conceptual layout plan requested in Comment 5 would address this issue.
12. SALDO Section 315-43.E.(3) – The plans should provide adequate clear sight triangles at intersections.
13. SALDO Section 315-44.A – We defer the review of the proposed pavement design to the Township Engineer; however, we suggest that the Lexington Boulevard extension segment be

built to meet the roadway standards for the ultimate condition. We do note that there is no pavement detail provided for the Lexington Boulevard extension and that the proposed commercial parking area does not meet the current Township Specification depicted in Appendix B.

14. SALDO Section 315-44.B – We defer the issue of curbing to the Township Engineer. We do note that curbing is not proposed along the Lexington Boulevard extension but is provided currently on built sections of the roadway within the Village.
15. SALDO Section 315-44.C – We defer review of the need for sidewalks (or alternative pedestrian facilities) to the Township Engineer or planning commission. It is noted that the *Ludwig's Corner Strategic Vision and Community Design Plan* recommends a walkable roadway for this loop road and sidewalks are provided along existing roadway segments within the Village. The Regional Comprehensive Plan also notes the importance of pedestrian and bicycle connections around the Village area.
16. ZO Section 390-135.F – The applicant proposes one parking space per employee and one parking space per customer, for a total of seven off street parking spaces for the self-storage facility; however, the Township does not have a specific parking requirement for self-storage facilities. Based on the ITE publication, *Parking Generation Manual*, 5th Edition, the proposed self-storage facility would require 10 parking spaces. Please provide further justification for the proposed parking rate.
17. ZO Section 390-136.B – The following comments are related to sight distance for the proposed accesses, both to PA Route 100 and to the proposed Lexington Boulevard extension:
 - a. Based on a site visit, it appears adequate sight distance can be provided at the proposed S.R. 0100/Lexington Boulevard Extension intersection. The existing available sight distances should be dimensioned and labeled on the plans (for the S.R. 0100/Lexington Boulevard Extension intersection, as well as the proposed Lexington Boulevard Extension driveways for the existing building and the proposed self-storage facility) for exiting traffic looking to the left and right, as well as for left-turn traffic entering each access looking ahead and behind. Furthermore, the plans should include a sight distance note to read as follows, which states the required sight distances noted in the traffic study.

"All sight distance obstructions (including but not limited to embankments and vegetation) shall be removed by the applicant to provide a minimum of XXX feet of sight distance to the left and XXX feet of sight distance to the right for a driver exiting the Bancroft Road access. The driver must be considered to be positioned ten feet from the near edge of the through travel lane (from the curbline if curbing is present) at an eye height of three feet six inches (3' 6") above the pavement surface located in the center of the closest travel lane designated for use by approaching traffic. This sight distance shall be maintained by the applicant."

- b. Sight distance information should be provided for the proposed driveways along Lexington Boulevard, including the driveway to the proposed self-storage facility and the future driveway on the parcel along the north side of the roadway (See also Comment 17a).
- 18. Please provide clarification on the development of the northern parcel (UPI No. 25-6-84), including driveway and parking area improvements. Please label the plans accordingly. At this time, it is assumed that this development and improvements are planned in the future by others.
- 19. The plans should be revised to provide truck turning templates for the Township's largest emergency service vehicle, as well as the largest delivery vehicle anticipated to visit the site. The curb radii at the PA Route 100/Lexington Boulevard Extension intersection may need to be revised based on the anticipated design vehicle.
- 20. A portion of the Lexington Boulevard Extension intersection with PA Route 100 will extend on to the adjacent property to the south (UPI No. 25-6-69), and coordination with the adjacent property owner will be required.
- 21. Please provide a stop sign and stop bar on the self-storage facility driveway approach to the Lexington Boulevard Extension, as well as along the Lexington Boulevard Extension approach to PA Route 100. Also, please provide double yellow centerlines in advance of these intersections.
- 22. The proposed access to PA Route 100, a State roadway, will require preparation of a separate Highway Occupancy Permit for submission to and approval of PennDOT. The Township and our office should be copied on all submissions and correspondence, as well as included to participate in meetings.
- 23. Upon resubmission, the applicant's engineer should compose a response letter that describes how each comment has been addressed and where any plan and/or report revisions are located. Additional comments regarding the traffic improvements and/or land development plans may follow upon receipt of future submissions.

If you have any questions, or require clarification on any of the aforementioned comments, please contact Jeff Gehman, E.I.T., or me at your convenience.

Sincerely,



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

JJY/JDG/ab



Mr. John Granger
January 8, 2023
Project Number 822C97.11

cc: Edgar Latshaw, P.E., LTL Consultants, LTD

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