



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEMORANDUM

Date: June 14, 2016

To: Mark Lucas, P.E.
East Bradford Township Engineer

From: Amy Kaminski, P.E., PTOE
G&A Transportation Services Manager

cc: Mandie Cantlin, Assistant Township Manager
Thomas F. Oeste, Esquire
Matthew E. Shinton, G&A E.I.T.

Reference: Conditional Use Testimony
TPN 51-7-115, 51-7-135, and 51-7-136
945 Tigue Road (T-359)
East Bradford Township, Chester County

G&A No. 15-10030

Mark,

As a follow up to the CU hearing on Tuesday, May 10, 2016, I offer the following discussion for your consideration related to Mr. Wichner's testimony:

1. Mr. Wichner indicated the Transportation Impact Study (dated January, 2016, supplement dated March 31, 2016) follows the process identified in PennDOT Strike Off Letter (SOL) 470-09-4; however the study is missing several elements as discussed below. (The page numbers reflect the SOL 470-09-4 page numbers.)
 - a. Page 3 indicates the highway occupancy permit (HOP) and Transportation Impact Study (TIS) should be prepared to explain how the project advances the municipality comprehensive plan land use and transportation goals; the study does not discuss how this project will advance the municipalities comprehensive plan or transportation goals.
 - b. Page 4 indicates if a Transportation Impact Study does not meet the minimum warranting characteristics; a Transportation Impact Assessment (TIA) may be required. "The purpose of a TIA is to assess the impact of the application on specific intersections or elements of the state transportation system." and "the scope of the TIA will be limited and targeted to the concern of the Department or the municipality" This section of the SOL 470-09-4 provides an opportunity for

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65 E. Butler Avenue | Suite 100 | New Britain, PA 18901
Phone: 215-345-4330 | Fax: 215-345-8606

East Bradford Township to request an transportation impact assessment regardless of what the SALDO requires.

- c. Page 5 requires the applicant receive direction from the Department and municipality regarding the elements that should be included in the Transportation Impact Study and the scoping meeting is to review the requirements of the TIS and the proposed location of the accesses; a scope of study was not requested and to our knowledge, a scoping meeting was not requested from PennDOT or East Bradford Township.
 - d. Page 12 requires the use of traffic data less than 3 years old and requires the submission of 24 hour automatic traffic recorder (ATR) counts including classification counts and speed data. The submitted TIS included PennDOT iTMS traffic counts by hour on Lenape Road (SR-52) from 2010 and did not include classification or speed data. No ATR information was provided for Tigue Road.
 - e. Page 13:
 - i. Requires documentation of the land use context of the property and key area roadways based on PennDOT/NJDOT *Smart Transportation Guidebook*; the land use context was not provided.
 - ii. Crash data is to be provided to determine crash patterns. No crash data was provided.
 - f. Page 14: Identify Pedestrian/Bike/Transit facilities including trails; the traffic study provided no discussion regarding pedestrian, bike or transit facilities.
 - g. Page 15: A gap analysis should be performed at the following locations:
 - i. Proposed access to Lenape Road (SR 52) to ensure adequate gaps for left turning movements to and from the site access are available.
 - ii. At the intersection of Lenape Road and Tigue Road to ensure adequate gaps for left turn movements to and from Tigue Road are available.
2. Below is a summary of the various impacts projected for the intersection of Lenape Road & Tigue Road. PennDOT identifies a degradation of 10 seconds or more for the intersection requires mitigation; however, if a critical movement is significantly degraded, an improvement may also be required. Based on the provided analysis, no critical movements or intersections require improvements but as discussed during the conditional use hearing a left turn lane is warranted on the southbound approach of Lenape Road at Tigue Road and we recommend the applicant construct left and right turn lanes on the westbound approach of Tigue Road at Lenape Road due to the anticipated increase in delay and queuing on the westbound approach.

AM Peak Hour Comparison

Lenape Road & Tigue Road LOS/Delay/Queue	Intersection LOS/Delay	Westbound Tigue Road LOS/Delay/Queue
AM –2015 Existing	A/1.0 sec	C/20.1 sec/14'
AM – 2023 No Build	A/1.3 sec	D/25.7 sec/23'
AM – 2023 Build	A/2.1 sec	D/30.1 sec/42'

PM Peak Hour Comparison

Lenape Road & Tigue Road LOS/Delay/Queue	Intersection LOS/Delay	Westbound Tigue Road LOS/Delay/Queue
PM –2015 Existing	A/2.5 sec	C/24.7 sec/28.9'
PM – 2023 No Build	A/3.9 sec	E/ 37.5 sec/81'
PM – 2023 Build	A/5.2 sec	E/45.1 sec/103'