

CENTER STATE ENGINEERING

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Monday, September 30th, 2019

Alan Weinberg
Business Administrator
Township of Monroe
1 Municipal Plaza
Township of Monroe, NJ 08831

***RE: Commercial Motor Vehicle Traffic Investigation and Certification
Prospect Plains Road (CR 614), Cranbury Half Acre Road
and Cranbury Station Road (CR 615)
Township of Monroe, Middlesex County, New Jersey***

Dear Mr. Weinberg:

I have completed my initial traffic investigation of the primary connector roads between Cranbury and the Township of Monroe, Prospect Plains Road (CR614), Cranbury Half Acre Road, and Cranbury Station Road (CR 615), for the purpose of petitioning the New Jersey Department of Transportation to limit use by Commercial Motor Vehicles (CMV) from Applegarth Road (CR 619) to the municipal border with Cranbury and offer the following:

Introduction

Monroe Township seeks to limit Commercial Motor Vehicle traffic to 8-tons on the aforementioned road segments to reduce tractor trailer traffic entering and exiting the existing and proposed distribution warehouse facilities (in excess of 20 million square feet) in Cranbury Township. Throughout the years of intensive warehouse development in Cranbury, promises have been made to direct the growing tractor trailer traffic away from the residential neighborhoods of Monroe and towards State Highway 130 and County Route 535, the most direct highway routes to the New Jersey Turnpike. An internal connector road, Liberty Way was partially constructed but remains unfinished with no apparent plans for completion. Liberty Way would have further encouraged the proper routing of tractor trailers out of Cranbury and to State Highway 130, County Route 535 and the New Jersey Turnpike, avoiding the segments of the aforementioned roadways in Monroe Township.

Cranbury, recognizing the importance of routing tractor trailer traffic away from residential areas and directly to the New Jersey Turnpike, includes in its Master Plan a discussion of Liberty Way as “a Minor Arterial road to provide a north/south bypass to the Route 130 corridor and to provide a direct connection between Cranbury’s warehouse-office areas and Exit 8A of the New Jersey Turnpike.”

In Monroe Township, segments of Prospect Plains Road, Cranbury Half Acre Road and Cranbury Station Road from Applegarth Road to the Cranbury border, provide access to single family homes, several large residential subdivisions, three (3) age restricted communities and recreational facilities. It’s

worth noting that there are no warehouse facilities along these roadways in Monroe Township. Monroe Township Zoning of the properties in this area is predominantly residential with several small office/commercial exceptions along Applegarth Road.

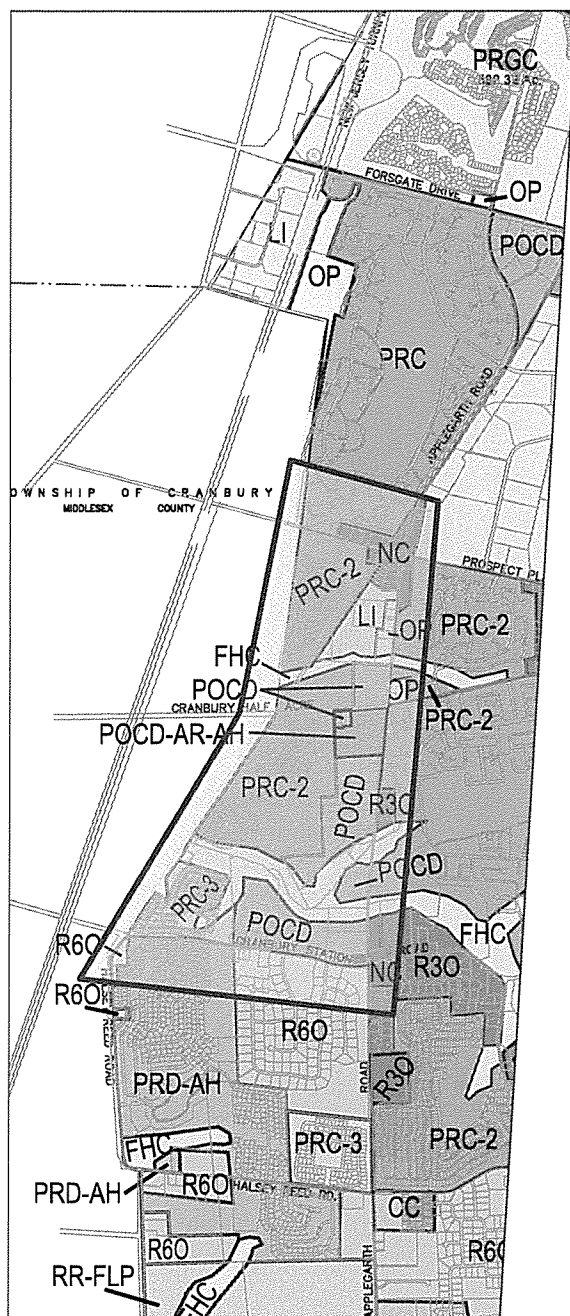
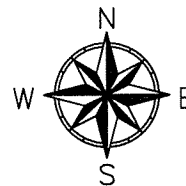
Reduced size maps, figures 1 and 2 (Aerial and Zoning) depicting these conditions are shown below (full size maps attached):



Figure 1



TOWNSHIP OF MONROE



LEGEND

RR-FLP	- RURAL RESIDENTIAL/FARMLAND PRESERVATION DIST.
R3A	- RESIDENTIAL
R60	- RESIDENTIAL
R30	- RESIDENTIAL
R20	- RESIDENTIAL
R10	- RESIDENTIAL
R7.5	- RESIDENTIAL
R5	- RESIDENTIAL
PD-AH	- PLANNED DEVELOPMENT/AFFORDABLE HOUSING
PRD-AH	- PLANNED RESIDENTIAL DEV'T/AFFORDABLE HOUSING
R-ARAF	- RESIDENTIAL-AGE RESTRICTED AFFORDABLE HOUSING
PD-SH	- PLANNED RESIDENTIAL DEV'T/SENIOR HOUSING
PRC	- PLANNED RETIREMENT COMMUNITY
PRC-2	- PLANNED RETIREMENT COMMUNITY
PRC-3	- PLANNED RETIREMENT COMMUNITY
PRGC	- PLANNED RESIDENTIAL GOLF COMMUNITY
OP	- OFFICE PROFESSIONAL
CC	- COMMUNITY COMMERCIAL
POCD	- PLANNED OFFICE COMMERCIAL DEVELOPMENT
POCD-AR-AH	- PLANNED OFFICE COMMERCIAL DEVELOPMENT-AGE RESTRICTED-AFFORDABLE HOUSING DISTRICT
NC	- NEIGHBORHOOD COMMERCIAL
HD	- HIGHWAY DEVELOPMENT
HD-R-AH	- HIGHWAY DEV'T/RESIDENTIAL AFFORDABLE HOUSING
LI	- LIGHT IMPACT INDUSTRIAL ZONE
FHC	- FLOOD HAZARD CONSERVATION DISTRICT
VC-1	- VILLAGE CENTER (OVERLAY)
VC-2	- VILLAGE CENTER (OVERLAY)
ASZ	- AIRPORT SAFETY OVERLAY ZONE
AHMUD-HD	- AFFORDABLE HOUSING/MIXED USE DEV'T/HIGHWAY DEVELOPMENT (OVERLAY)
MU-HD-R-AH	- MIXED USE/HIGHWAY DEVELOPMENT/RESIDENTIAL/AFFORDABLE HOUSING DISTRICT

PORTION OF ZONING MAP

JANUARY 6, 2017

COUNCIL ORDINANCE 0-5-2017-011

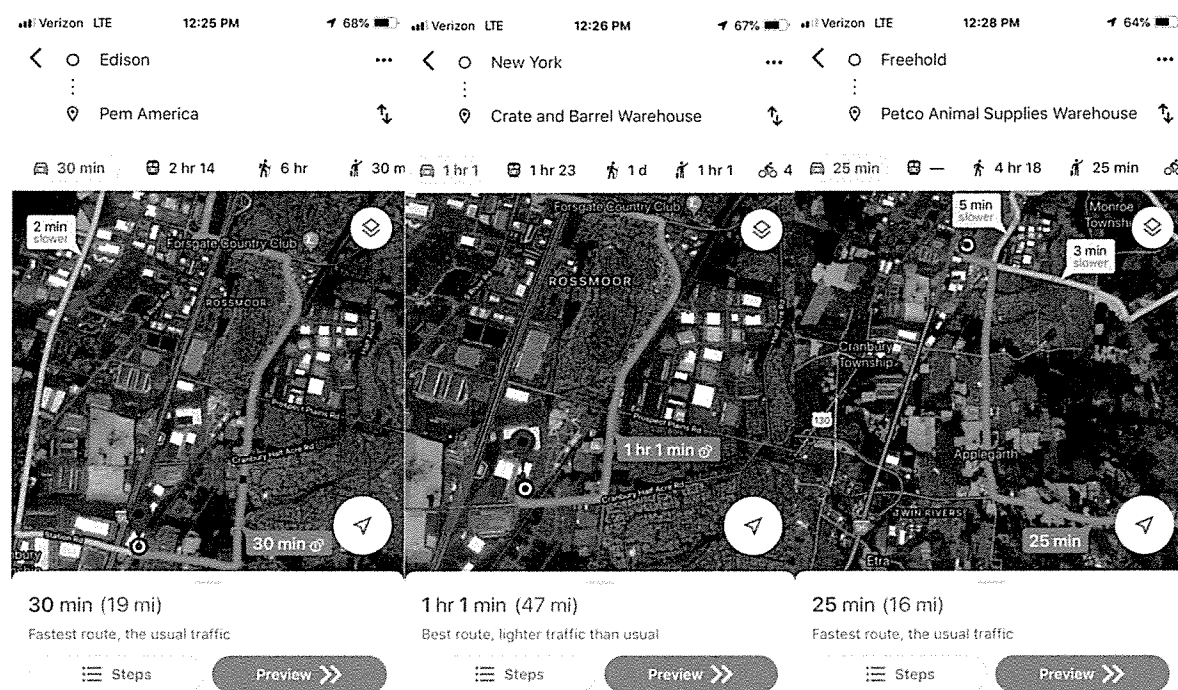
SCALE: 1"=3000'



Figure 2

Although the focus of this report is the restriction of CMV's from the Monroe's residential neighborhoods on Prospect Plains Road (CR614), Cranbury Half Acre Road, and Cranbury Station Road (CR 615), I would be remiss in not briefly discussing the need for a coordinated effort between Local, County and State authorities in crafting a regional truck routing plan and appropriate signage plan to insure the proper movement of tractor trailers through the region. Directional signage and weigh restrictions will be critical to the success of any effort to limit tractor trailers from the residentially developed segments of the roads in this study and the region. Cranbury began this weight restriction process when they placed a 4-ton weight restriction on Cranbury Station Road west of Route 130 in 2018 with County and State Approval. We are seeking the same protection for residential neighborhoods in Monroe Township.

The expanded use of GPS and crowdsource transportation applications that simply look for the fastest route based on posted speed limits and real time traffic conditions, likely plays a role in directing tractor trailers through Monroe's residential areas. Below are three screen shots demonstrating this:



NJDOT Investigative Requirements

This investigation was performed in accordance with New Jersey Administrative Code, Title 16 – Transportation, Chapter 27 – Traffic Regulations and Traffic Control Devices which requires the following as it relates to Commercial Motor Vehicle (CMV) Restrictions:

1. The type of proposed CMV restriction, the non-State highways where the restriction will apply or the non-State highways that will establish the truck route network, and the authority having jurisdiction over those non-State highways;

2. Traffic count data to justify the proposed restriction. The data shall include a classification count that indicates the percentage and volume of CMV's that would be restricted.
3. Crash summary and a collision diagram. This information shall cover the most recent three-year period and include direction of vehicles; type of crash including but not limited to, right angle and same direction; types of vehicles involved; date; time of day; weather conditions; and severity of the crashes, including injuries and fatalities. It shall be acceptable to submit copies of crash reports without the appropriate summary and diagram;
4. Locations where entrapment may occur;
5. Site information including, but not limited to, condition diagrams and site plans that provide basic location data, such as lane use and lane width, speed limits, intersection sight distances and approximate geometry, as appropriate to the request;
6. Alternate route(s) available to CMV's;
7. Documentation of governing body support for alternate route(s) available to CMV's within or impacting another authority's non-State highway.
8. A recommendation regarding the restriction of CMV's or the truck route network being established, in the form of a certification of the engineer.

Type of Proposed CMV Restriction

Monroe Township proposes an 8-ton weight restriction on Prospect Plains Road (CR 614), Cranbury Half Acre Road, and Cranbury Station Road (CR 615). The CMV restriction would extend from Applegarth Road (CR 619) to the Municipal border with Cranbury Township for each road. Prospect Plains Road (CR 614) and Station Road (CR 615) are under Middlesex County jurisdiction. Cranbury Half Acre Road is under Monroe Township jurisdiction. As a result of increasing tractor trailer traffic, Cranbury initiated a 4-ton CMV restriction on Cranbury Station Road (CR 615), for the residential neighborhood west of State Highway 130 in Cranbury Township. Middlesex County and NJDOT approved this weight restriction. Monroe Township is seeking a higher 8-ton weight, restricting fewer trucks on the residential sections of the same road in Monroe Township.

Traffic Count Data

Center State Engineering deployed a Houston Radar Armadillo Tracker Bidirectional Radar traffic data collector on June 3rd through June 29th at three (3) locations. We collected traffic volume and vehicle size data for two days (weekdays only) at each location.

The first location, Cranbury Station Road (CR 615), yielded the following:

Eastbound:

Total Vehicles: 11,999 (2 days)

CMV's: 625 (2 days)

Percent CMV's: 5.2%

Westbound:

Total Vehicles: 12,257 (2 days)

CMV's: 850 (2 days)

Percent CMV's: 6.9%

The second location, Cranbury Half Acre Road, yielded the following:

Eastbound:

Total Vehicles: 8,672 (2 days)

CMV's: 472 (2 days)

Percent CMV's: 5.4%

Westbound:

Total Vehicles: 8,875 (2 days)

CMV's: 445 (2 days)

Percent CMV's: 5.0%

The third location, Prospect Plains Road (CR 614), yielded the following:

Eastbound:

Total Vehicles: 11,075 (2 days)

CMV's: 826 (2 days)

Percent CMV's: 7.5%

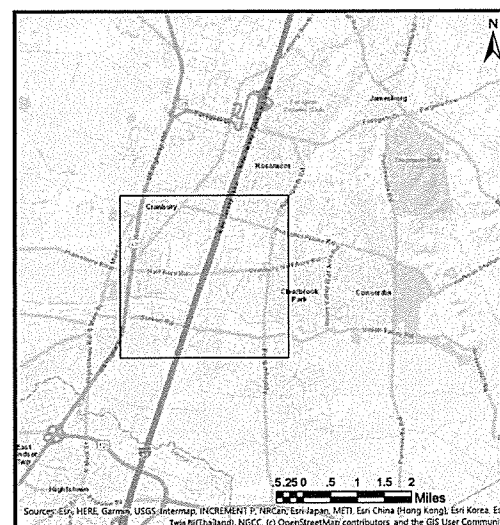
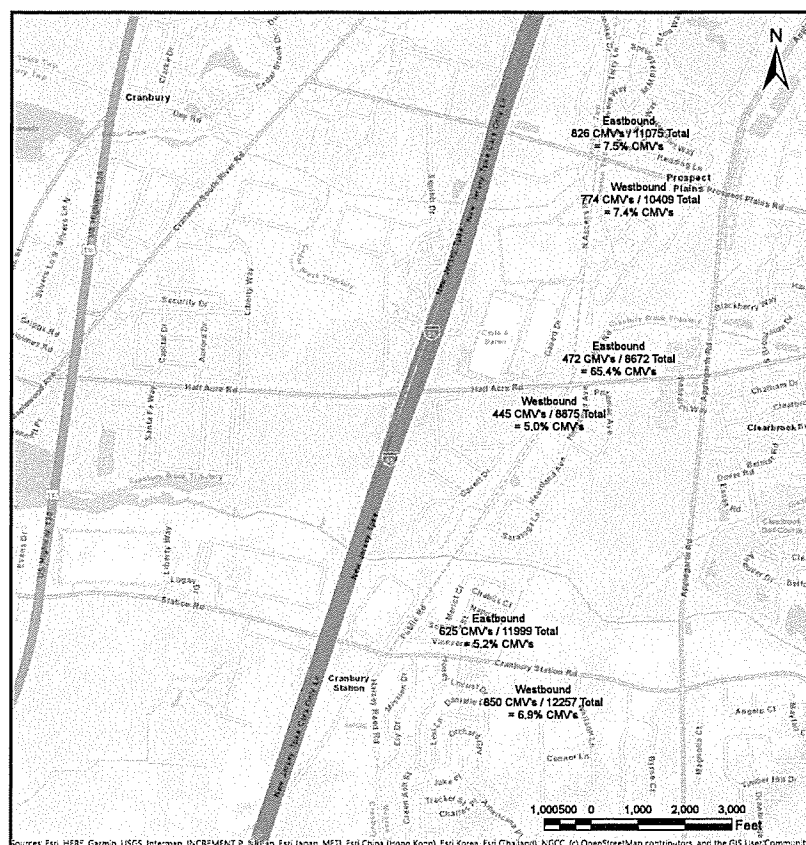
Westbound:

Total Vehicles: 10,409 (2 days)

CMV's: 774 (2 days)

Percent CMV's: 7.4%

A reduced size map depicting this data is shown below (full size map attached):



Applegarth Road Corridor, Monroe Township
Middlesex County, NJ

Commercial Motor Vehicle Counts

Counts are for a 48hr period taken between
6/3/19 and 6/29/19, weekdays only.

Prepared by: Ernest W. Feist, PE, PP, CME
Center State Engineering
481 Spotswood Englishtown Road
Monroe Township, NJ 08831
CSE Job# 19-007-08
September 24th, 2019

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Crash Summary Data

Crash reports for the past three years have been compiled by the Monroe Township Police Department and are attached. The report search included accidents on Prospect Plains Road (CR614), Cranbury Half Acre Road, and Cranbury Station Road (CR 615) between Applegarth Road (CR 619) and the municipal border with Cranbury Township.

Monroe Township Police reported a total of 92 accidents, 49 on Prospect Plains Road (CR 614), 23 on Cranbury Station Road (CR 615) and 20 on Cranbury Half Acre Road. No fatalities were reported during this three year period.

Entrapment Analysis

Applegarth Road (CR 619)

Trucks traveling along Applegarth Road will not face the possibility of entrapment as they travel through Monroe's residential neighborhoods to Cranbury warehouses. This traffic can simply continue along Applegarth Road to Route 33, Route 32 and New Jersey Turnpike Interchanges 8 and 8A.

East Bound on Cranbury Station Road (CR 615)

Trucks traveling east bound on Station Road (CR 615) out of Cranbury Township would have the opportunity to turn right onto Hightstown Cranbury Station Road and then right onto Brickyard Road to State Highway 130. Hightstown Cranbury Station Road is currently utilized by truck traffic entering and exiting Amazon and other facilities in Cranbury Township.

East Bound on Cranbury Half Acre Road

Trucks traveling east bound on Cranbury Half Acre Road out of Cranbury Township would have the opportunity to turn left onto Gravett Drive and then left onto Prospect Plains Road to Cranbury South River Road (CR 535). With appropriate signage at warehouse exits in Cranbury, almost no trucks would need to use this route.

East Bound on Prospect Plains Road (CR 614)

Trucks traveling east bound on Prospect Plains Road (CR 614) out of Cranbury Township would have the opportunity to turn right on Gravett Drive and then right on Cranbury Half Acre Road to State Highway 130. With appropriate signage at warehouse exits in Cranbury, almost no trucks would need to use this route.

Signage

Directional signage at the exits of the warehouse distribution centers in Cranbury is recommended to reduce the likelihood of tractor trailers approaching the restricted roadway segments and having to re-route.

A reduced size map depicting this data is shown below (full size map attached):