

# **Andrea Drive Traffic Study**

**July 2009**



**Police Department**

**Thomas J. Nestel  
Chief of Police**

## **Executive Summary**

In November 2008, residents from the neighborhood of Andrea Drive and Russell Road presented to the Board of Commissioners a concern about dangerous driving and heavy cut-through traffic in their community.

A traffic study conducted by the police department noted multiple violations of the stop sign controlling the intersection of Andrea Drive and Russell Road but did not find any evidence of speeding or a high number of crashes. The study did verify the fact that Andrea Drive is used as a cut-through route for motorists attempting to avoid the intersection of Easton Road and Fitzwatertown Road.

Based on a public safety perspective, an enforcement strategy beyond directed patrols is not believed to be necessary at this location. If a significant community interest exists in reducing cut-through traffic as a quality of life issue, the department would recommend a traffic flow change at the intersection. This recommendation would only be presented to the Board of Commissioners if there was 75% support among the residents living on Andrea Drive and on Russell Road.

If a community member successfully compiled a petition indicating overwhelming support for the idea, the department would recommend making Andrea Drive “Right Turn Only” onto Russell Road between 1600-1900 hours.

The residents have expressed satisfaction with the department’s use of directed patrols to combat the stop sign violations. Sporadic directed patrols will continue at this location. Zone officers and patrol supervisors are aware of the problem described in this report.

## Project Initiation

On 24 November 2008, residents from the area of Andrea Drive and Russell Road addressed the Public Health and Safety Committee regarding traffic in their neighborhood. Ward 4 resident, Mr. Mark Bates, represented the group and spoke about motorists using Andrea Drive to avoid the traffic signal at Easton Road and Fitzwatertown Road. Mr. Bates related that the cut-through traffic exceeds the speed limit and disregards the stop sign at Andrea Drive and Russell Road.



Andrea Drive and Russell Road

## Traffic Study Parameters

A study was completed to examine whether the traffic using Andrea Drive from Easton Road should prompt a specialized enforcement initiative to counter driving behavior that jeopardizes public safety in the neighborhood. Speed and volume data was gathered and compared with the roadway dynamics and the residential layout of the community.

## Location Description

Andrea Drive from Easton Road to Russell Road has a 5.2% uphill grade. Russell Road from Andrea Drive to Fitzwatertown Road has a 1.8% uphill grade and a 10% downhill grade north of Andrea Drive. The grade of the roadway was determined by calculating the mathematical equation:

$$(Rise \div Run) \times 100$$

Rise = (feet above sea level for location A – feet above sea level for location B)

Run = length between location A and location B

Andrea Drive serves as an access route for approximately 60 homes on Russell Road and Woodhill Road. Andrea Drive is used by motorists southbound on Easton Road to either gain access to the closed loop roadway or to gain access to Fitzwatertown Road by turning onto Russell Road. Residents travelling northbound on Easton Road or either direction on Fitzwatertown Road would use Russell Road or Woodhill Road to gain access to the neighborhood.

## Roadway Dimensions

Easton Road at Andrea Drive is approximately 61 feet wide and posts a 40 mile per hour speed limit.

Andrea Drive between Easton and Russell Roads is approximately 32 feet wide and approximately 731 feet long. The roadway has no speed limit signs posted however using the state standards, the roadway should be posted at 25 mile per hour speed limit.

Russell Road at Andrea Drive is approximately 30 feet wide and posts a 25 mile per hour speed limit. Russell Road between Fitzwatertown Road and Andrea Drive is approximately 272 feet long. Russell Road between Andrea Drive and Woodhill Road is approximately 671 feet long.

## Traffic Control Devices

The only traffic control devices in this closed loop roadway consist of stop signs at the following locations:

- 1) Andrea Drive and Russell Road
- 2) Russell Road and Fitzwatertown Road
- 3) Woodhill Road and Fitzwatertown Road

## Speed, Volume and Crash Data

Andrea Drive between Easton Road and Russell Road

Speed and Volume Data			
Study Dates	Speed Limit	85 <sup>th</sup> Percentile Speed	Number of Vehicles
8 Feb 09 to 15 Feb 09	25	30	2044

The majority of the traffic volume travels Andrea Drive between the hours of 0700 and 1900. The peak for the volume regularly occurs on weekdays beginning at 1600 hours and ending at 1900 hours.

Crash Data				
Intersection	2006	2007	2008	2009
Andrea Drive and Russell Road	0	0	0	0
Fitzwatertown Road and Russell Road	4	0	1	0
Fitzwatertown Road and Woodhill Road	2	0	0	0

The data for 2009 consists of crashes reported during the first five months of the year. All other years include the entire twelve months worth of crash data.

PennDot Data		
Location	Study Date	Number of Vehicles
Easton Road S/B at Fitzwatertown Road	15 July 2008 (24 hrs)	17011
Fitzwatertown Rd at Russell Rd (E/B & W/B)	15 July 2008 (24 hrs)	17123
Fitzwatertown Rd at Woodhill Rd (E/B & W/B)	22 July 2004 (24 hrs)	15412

## **Enforcement Opportunities**

Speed enforcement is strictly controlled by the Commonwealth's motor vehicle code. Local police departments are prohibited from using radar units to detect vehicle speed. The equipment utilized by the Upper Moreland Police Department is a combination of calibrated speedometers and AccuTrak speed timing devices. The two legislative guidelines that must be obeyed by the UMPD officers are as follows:

- Title 75 Pa.C.S. § 3368 (a) requires that police officers using calibrated speedometers time violators for a distance of at least 3/10 of a mile.
- 75 Pa.C.S. § 3368 (c)(4) limits police officers using AccuTrak devices to only issue citations for speeds in excess of 10 miles over the speed limit.

In residential areas, lines are painted on the roadway to create a certified distance for officers to use the AccuTrak devices. A citation may only be issued for a speed violation that exceeds 10 miles per hour over the posted limit. In the case of the data gathering point noted earlier in this report, the 85<sup>th</sup> percentile speed does not reach the threshold which would justify the issuance of speeding citations. In fact, the number of violators that would have been eligible for a speeding citation during an entire week's worth of data gathering is 27 which is approximately 1% of the vehicles using that roadway.

The Andrea Drive traffic flow does not warrant specialized speed enforcement however, directed patrols conducted at Andrea Drive and Russell Road indicate a significant number of motorists failing to adhere to the stop sign controlling that intersection.

An interesting fact that surfaced during enforcement efforts was the high number of neighborhood residents stopped for failing to adhere to the stop sign at Andrea Drive and Russell Road. It seems that the local community must accept the reality that they are a contributing factor in the creation of this public safety issue.

## **Alternative Solutions**

The study has reviewed a variety of potential alternatives for addressing the public safety issue created by traffic using Andrea Drive from Easton Road. The first three options are NOT RECOMMENDED. Option #4 should only be implemented if significant community support exists.

### **1) Make Andrea Drive a dead-end street at Russell Road**

- Although this would prevent cut-through traffic from Easton Road, it should only be done with the support of the residents on Russell Road and Woodhill Road
- It would create a speeding problem on Russell Road since there would be no stop sign at the Andrea Drive intersection and the 10% downhill grade encourages excessive speed
- This may increase crashes on Fitzwatertown Road since residents will be forced to gain access to southbound Easton Road by turning eastbound on Fitzwatertown Road from Russell Road or Woodhill Road

- According to Chapter Five of Pennsylvania’s Traffic Calming Handbook, “Road closures can serve to deprive the road of its public character by limiting its use, rendering the road ineligible for assistance from the Liquid Fuels fund”
- 2) Make Russell Road “One-Way” northbound
- Two way traffic is a traffic calming measure and changing Russell Road to one-way could increase the speed of vehicles traveling on the 10% downhill grade
  - This may increase crashes on Fitzwatertown Road since residents will be forced to gain access to southbound Easton Road by turning eastbound on Fitzwatertown Road from Woodhill Road
  - Although this would prevent cut-through traffic from Easton Road, it should only be done with the support of the residents on Russell Road and Woodhill Road
- 3) Make Andrea Drive “Do Not Enter” from Easton Road during specific timeframes
- It would be very difficult to provide adequate signage and advance notification to discourage Easton Road motorists from using Andrea Drive as a cut-through street
  - Although this would prevent cut-through traffic from Easton Road, it should only be done with the support of the residents and businesses on Andrea Drive
  - According to Chapter Five of Pennsylvania’s Traffic Calming Handbook, “Road closures can serve to deprive the road of its public character by limiting its use, rendering the road ineligible for assistance from the Liquid Fuels fund”
- 4) Make Andrea Drive “Right Turn Only” at Russell Road
- It would be very difficult to provide adequate signage and advance notification to discourage Easton Road motorists from using Andrea Drive as a cut-through street
  - Although this would prevent cut-through traffic from Easton Road, it should only be done with the support of the residents living on Andrea Drive and on Russell Road
  - This option would be most effective if limited to the 1600-1900 hour timeframe

### **Directed Patrol Results**

After hearing the concerns of the residents in November 2008, the intersection of Andrea Drive and Russell Road was designated as a directed patrol location. Directed patrols are a tactic utilized by the police department to focus on specifically identified problem areas. Depending on the nature of the complaint, police resources are dedicated at a higher frequency than random patrol provides. Supervisors verify that officers are in fact channeling additional attention to the area by reviewing daily activity reports. During the directed patrols conducted between December 2008 and May 2009, twenty-seven stop sign violations were observed and addressed. Nearly 30% of the violators were local residents.

## **Follow-Up with Community**

Mrs. Renee Bates has spoken to Chief Nestel about the concerns voiced in November 2008 and has expressed satisfaction with the enforcement and visibility of the police department.

## **Analysis**

*A review of traffic speed provides definitive results:*

A very small percentage of the vehicles travelling on Andrea Drive do so in violation of the enforceable speed limit.

*A review of traffic crashes provides definitive results:*

Crash data does not assist in indicating that a hazardous public safety problem exists.

*A review of traffic volume provides definitive results:*

The volume of traffic using Andrea Drive greatly exceeds the number of residents living in this closed loop community. Additionally, a specific window of time can be identified which coincides with the rush hours that routinely clog the Easton Road corridor.

## **Conclusion**

Vehicle speed and crash data on and near the Andrea Drive corridor do not support a need for an immediate response from the Police Department. However, the traffic volume clearly supports the quality of life complaint received from the community in November 2008. Although there does not seem to be an overwhelming public safety concern at this location, there is definitely a nuisance issue caused by the high volume of cut-through traffic.

The option most likely to have a positive effect on the high volume of cut-through traffic is to make Andrea Drive “Right Turn Only” at Russell Road between 1600-1900 hours. The Andrea Drive route is one that would be known to daily motorists and as such, would require a short learning curve with visible deterrence by the police department. During the implementation phase, police would have to be in the area to prohibit left turns and speeding on the downhill grade of Russell Road.

Since the problem exists primarily as a nuisance issue, community support should be the deciding factor on whether or not a solution is necessary. If the residents in the community believe that action other than directed patrols should be taken to address cut-through traffic, then a community member should circulate a petition to garner 75% support among the residents living on Andrea Drive and on Russell Road. The petition should include a legible signature, address and phone number for each person supporting the proposed solution. Allowing the residents to decide the outcome of this problem is permissible because regardless of the final decision, the surrounding area will not be negatively affected.

The alternative to instituting a “Right Turn Only” from Andrea Drive to Russell Road is to continue with high visibility directed patrols focused on the enforcement of stop sign violations during timeframes identified as high volume hours.

**Submitted by:**  
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