
SCHUYLKILL TOWNSHIP POLICE DEPARTMENT

INTEROFFICE MEMORANDUM

TO: SCHUYLKILL TWP BOARD OF SUPERVISORS
FROM: CHIEF JAMES FETTERMAN
SUBJECT: TRAFFIC STUDY FOR ANDERSON AVE
DATE: 7/2/2008
CC: TWP MANAGER, ROAD MASTER

The traffic study information was compiled by Gilmore & Associates for Anderson Ave which began on June 9-2008 and ran until June 13-2008. Due to unforeseen weather, Anderson Ave just west of Norris was closed for a day and half due to down wires. The information that was compiled showed the following:

A: Anderson & Kleyona

Vehicles traveling the roadway: Average per day 444 westbound vehicles

Average per day 447 eastbound vehicles

Vehicle travel speed average in 85 percentile: Average speed for westbound 32 mph

Vehicle average speed during AM-PM peak hours: westbound 26 to 30 MPH

Eastbound 26 to 30 mph

Vehicle overall average speed: Westbound 26 mph

Eastbound 28 mph

B: Anderson & Carolina:

Vehicles traveling the roadway: Average per day 498 westbound vehicles

Average per day 253 eastbound vehicles

Vehicle travel speed average in 85 percentile: Average speed for westbound 31 mph

Vehicle average speed during AM-PM peak hours: westbound 01 to 15 MPH

Eastbound 26 to 30 mph

Vehicle overall average speed: Westbound 15 mph

Eastbound 30 mph

Accidents reported by intersection:

A: Anderson & Kleyona Total of 3 accidents since January 1, 1996 to present

Of these 1 was a reportable accident

2 were non-reportable

No injuries reported

B. Anderson & Norris Total of 1 accident since January 1, 1996 to present

Of this one, it was non reportable

No injuries reported

Attached is a copy of the Federal Highway Uniform Traffic control device manual which was adopted by Penn DOT and which we have been following. Under section 2B for guidance in placing stop signs neither of these intersections meet the standards for stop signs. It also clearly states that stop signs should not be used to control speed. Under multi-way stop sign placement the total minimum number of vehicles going through the intersection should be 300 per hour for an eight hour period. A crash problem is indicated as 5 or more reportable crashes in a 12 month period which we have had only 4 accidents since 1996 and only 1 was reportable.

It is the Board Of Supervisors position on whether the stop sign goes forward or not, however if the Board decides to proceed Kleyona and Anderson would make the most sense given the cross traffic at the intersection.

Table 2B-1. Regulatory Sign Sizes (Sheet 5 of 5)

Sign	MUTCD Code	Section	Conventional Road	Expressway	Freeway	Minimum	Oversized
Keep Off Median	R11-1	2B.47	600 x 750 (24 x 30)	—	—	—	—
Road Closed	R11-2	2B.48	1200 x 750 (48 x 30)	—	—	—	—
Road Closed - Local Traffic Only	R11-3,3a,3b,4	2B.48	1500 x 750 (60 x 30)	—	—	—	—
Weight Limit	R12-1,2	2B.49	600 x 750 (24 x 30)	900 x 1200 (36 x 48)	—	—	900 x 1200 (36 x 48)
Weight Limit	R12-3	2B.49	600 x 900 (24 x 36)	—	—	—	—
Weight Limit	R12-4	2B.49	900 x 600 (36 x 24)	—	—	—	—
Weight Limit	R12-5	2B.49	600 x 900 (24 x 36)	900 x 1200 (36 x 48)	1200 x 1500 (48 x 60)	—	—
Metric Plaque	R12-6	2B.49	600 x 225 (24 x 9)	—	—	—	—
Weigh Station	R13-1	2B.50	1800 x 1200 (72 x 48)	2400 x 1650 (96 x 66)	3000 x 1100 (120 x 84)	—	—
Truck Route	R14-1	2B.51	600 x 450 (24 x 18)	—	—	—	—
Hazardous Material	R14-2,3	2B.52	600 x 600 (24 x 24)	750 x 750 (30 x 30)	900 x 900 (36 x 36)	—	1050 x 1050 (42 x 42)
National Network	R14-4,5	2B.53	600 x 600 (24 x 24)	750 x 750 (30 x 30)	900 x 900 (36 x 36)	—	1050 x 1050 (42 x 42)
Railroad Crossbuck	R15-1	8B.03	1200 x 225 (48 x 9)	—	—	—	—
Look	R15-8	8B.16	900 x 450 (36 x 18)	—	—	—	—

Notes:

1. Larger signs may be used when appropriate.
2. Dimensions are shown in millimeters followed by inches in parentheses and are shown as width x height.

Section 2B.05 STOP Sign Applications**Guidance:**

STOP signs should be used if engineering judgment indicates that one or more of the following conditions exist:

- A. Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;
- B. Street entering a through highway or street;
- C. Unsignalized intersection in a signalized area; and/or
- D. High speeds, restricted view, or crash records indicate a need for control by the STOP sign.

Standard:

Because the potential for conflicting commands could create driver confusion, STOP signs shall not be installed at intersections where traffic control signals are installed and operating except as noted in Section 4D.01.

Portable or part-time STOP signs shall not be used except for emergency and temporary traffic control zone purposes.

Guidance:

STOP signs should not be used for speed control.

STOP signs should be installed in a manner that minimizes the numbers of vehicles having to stop. At intersections where a full stop is not necessary at all times, consideration should be given to using less restrictive measures such as YIELD signs (see Section 2B.08).

Once the decision has been made to install two-way stop control, the decision regarding the appropriate street to stop should be based on engineering judgment. In most cases, the street carrying the lowest volume of traffic should be stopped.

A STOP sign should not be installed on the major street unless justified by a traffic engineering study.

Support:

The following are considerations that might influence the decision regarding the appropriate street upon which to install a STOP sign where two streets with relatively equal volumes and/or characteristics intersect:

- A. Stopping the direction that conflicts the most with established pedestrian crossing activity or school walking routes;
- B. Stopping the direction that has obscured vision, dips, or bumps that already require drivers to use lower operating speeds;
- C. Stopping the direction that has the longest distance of uninterrupted flow approaching the intersection; and
- D. Stopping the direction that has the best sight distance to conflicting traffic.

The use of the STOP sign at highway-railroad grade crossings is described in Section 8B.08. The use of the STOP sign at highway-light rail transit grade crossings is described in Section 10C.04.

Section 2B.06 STOP Sign Placement

Standard:

The STOP sign shall be installed on the right side of the approach to which it applies. When the STOP sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.29) shall be installed in advance of the STOP sign.

The STOP sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.

STOP signs and YIELD signs shall not be mounted on the same post.

Guidance:

Other than a DO NOT ENTER sign, no sign should be mounted back-to-back with a STOP sign in a manner that obscures the shape of the STOP sign.

Support:

Section 2A.16 contains additional information about separate and combined mounting of other signs with STOP signs.

Guidance:

Stop lines, when used to supplement a STOP sign, should be located at the point where the road user should stop (see Section 3B.16).

If only one STOP sign is installed on an approach, the STOP sign should not be placed on the far side of the intersection.

Where two roads intersect at an acute angle, the STOP sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

Where there is a marked crosswalk at the intersection, the STOP sign should be installed in advance of the crosswalk line nearest to the approaching traffic.

Option:

At wide-throat intersections or where two or more approach lanes of traffic exist on the signed approach, observance of the stop control may be improved by the installation of an additional STOP sign on the left side of the road and/or the use of a stop line. At channelized intersections, the additional STOP sign may be effectively placed on a channelizing island.

Support:

Figure 2A-2 shows examples of some typical placements of STOP signs.

Section 2B.07 Multiway Stop Applications

Support:

Multiway stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The restrictions on the use of STOP signs described in Section 2B.05 also apply to multiway stop applications.

Guidance:

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

- A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
- B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
 3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Option:

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.

Section 2B.08 YIELD Sign (R1-2)**Standard:**

The YIELD (R1-2) sign (see Figure 2B-1) shall be a downward-pointing equilateral triangle with a wide red border and the legend YIELD in red on a white background.

Support:

The YIELD sign assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down or stop when necessary to avoid interfering with conflicting traffic.

Section 2B.09 YIELD Sign Applications**Option:**

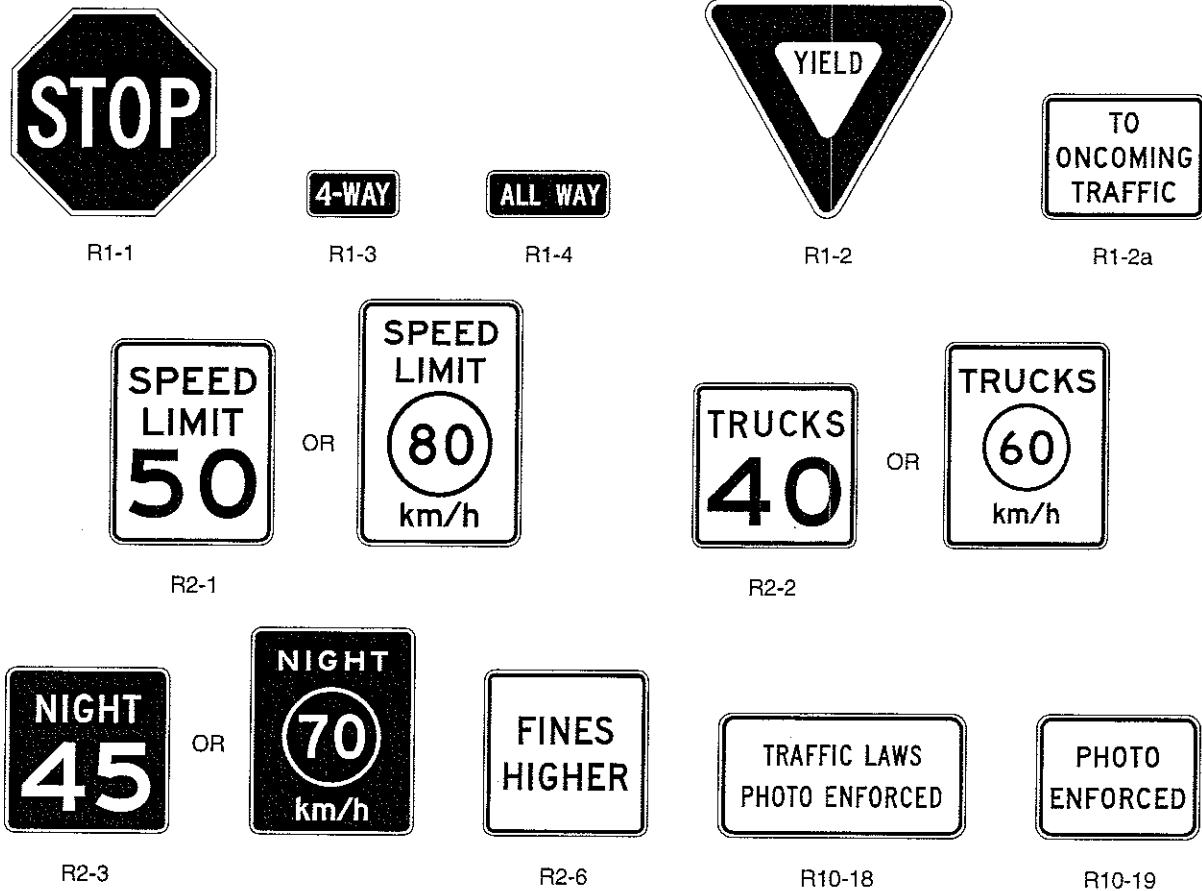
YIELD signs may be used instead of STOP signs if engineering judgment indicates that one or more of the following conditions exist:

- A. When the ability to see all potentially conflicting traffic is sufficient to allow a road user traveling at the posted speed, the 85th-percentile speed, or the statutory speed to pass through the intersection or to stop in a reasonably safe manner.
- B. If controlling a merge-type movement on the entering roadway where acceleration geometry and/or sight distance is not adequate for merging traffic operation.
- C. The second crossroad of a divided highway, where the median width at the intersection is 9 m (30 ft) or greater. In this case, a STOP sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.
- D. An intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.

Standard:

A YIELD (R1-2) sign shall be used to assign right-of-way at the entrance to a roundabout intersection.

Figure 2B-1. STOP, YIELD, Speed Limit, FINES HIGHER, and Photo Enforcement Signs



Section 2B.10 YIELD Sign Placement

Standard:

The YIELD sign shall be installed on the right side of the approach to which it applies. YIELD signs shall be placed on both the left and right sides of approaches to roundabout intersections with more than one lane on the signed approach where raised splitter islands are available on the left side of the approach. When the YIELD sign is installed at this required location and the sign visibility is restricted, a Yield Ahead sign (see Section 2C.29) shall be installed in advance of the YIELD sign.

The YIELD sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.

YIELD signs and STOP signs shall not be mounted on the same post.

Guidance:

Other than a DO NOT ENTER sign, no sign should be mounted back-to-back with a YIELD sign in a manner that obscures the shape of the YIELD sign.

Support:

Section 2A.16 contains additional information about separate and combined mounting of other signs with YIELD signs.

Guidance:

Yield lines, when used to supplement a YIELD sign, should be located at a point where the road user should yield (see Section 3B.16).

Where two roads intersect at an acute angle, the YIELD sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

REPORT OF ACCIDENTS BY INTERSECTION

Accidents on KLEYONA at or near ANDERSON
Between 01/01/1996 and 07/02/2008

Incident	Reportable / NonRep	Accident Date	Report Date	No. Vehicles	No. Killed	No. Injured
96-04-1070	Non-Reportable	04/30/1996	04/30/1996	1	0	0
Primary Street:	ANDERSON AVE		Traffic Control Device	Unknown		
Nearest Reference Point:	KLEYONA AVE					
Illumination:	Daylight					
Weather Conditions:	Raining					
Road Surface Contition:	Wet					

Incident	Reportable / NonRep	Accident Date	Report Date	No. Vehicles	No. Killed	No. Injured
03-12-4182	Non-Reportable	12/19/2003	12/19/2003	1	0	0
Primary Street:	KLEYONA AVE		Traffic Control Device	No Controls		
Nearest Reference Point:	ANDERSON AVE					
Illumination:	Daylight					
Weather Conditions:	No Adverse Conditions					
Road Surface Contition:	Dry					

Incident	Reportable / NonRep	Accident Date	Report Date	No. Vehicles	No. Killed	No. Injured
04-08-2641	Reportable	08/07/2004	08/07/2004	2	0	0
Primary Street:	E. ANDERSON AVE		Traffic Control Device	No Controls		
Nearest Reference Point:	KLEYONA AVE		(AA45)			
Illumination:	Daylight					
Weather Conditions:	No Adverse Conditions					
Road Surface Contition:	Dry					

Totals :	No. Accidents:	3	Reportable:	1	Non-Reportable:	2
	No. Vehicles:	4				
	No. Killed:	0				
	No. Injured:	0				

REPORT OF ACCIDENTS BY INTERSECTION

Accidents on NORRIS at or near ANDERSON

Between 01/01/1996 and 07/02/2008

Incident	Reportable / NonRep	Accident Date	Report Date	No. Vehicles	No. Killed	No. Injured
00-02-0460	Non-Reportable	02/14/2000	02/14/2000	2	0	0

Primary Street: **ANDERSON AVENUE**
Intersecting Street or: **NORRIS**

Traffic Control Device **No Controls**
Stop Sign

Illumination: **Daylight**
Weather Conditions: **Raining**
Road Surface Contition: **Wet**

Totals :	No. Accidents:	1	Reportable:	0	Non-Reportable:	1
	No. Vehicles:	2				
	No. Killed:	0				
	No. Injured:	0				